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Extra-individual reality

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PART IV. CHAPTERS FOR A PENULTIMATE PHILOSOPHY. IX-XI.

EXTRA-INDIVIDUAL REALITY; ITS EXISTENCE.

THE CONCEPTS FUNDAMENTAL IN THE SCIENCES

(Substance, Energy).

By Revere Randolph Gurley, M. D., M. Sc.

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THE TRADITIONAL AND THE REAL BERKELEY.

Worthlessness of evidence held to prove noumena nonexistent. Berkeley's work; entails no such consequences as claimed; separable into valid and invalid portions; idealism superstructure on invalid portion. Valid Berkeley-ism formula all-inclusive for the mental; does not assert idealism! Berkeley merely criticized away pseudo-proofs of reality, and put nothing valid in their stead, leaving tabula rasa on which he may write who can.

Idealist, realist, and materialist, appealing to same data and methodology, must reach same conclusion; "materialism" the metaphysical norm,—idealism and realism illegitimate superadditions thereto.

Constructively, proof is begun of existence of noumena—proof that something other than I exists and includes "other selves," which completed, existence of sensations will evidence existence of the sensation-generating factors, energy and matter. Criterion of and formula all-inclusive for extraindividual reality.

Continuing the attempt to apply the data and methods of science to elucidation of so-called metaphysical problems, and to show that these are in so far as they are legitimate problems, proper subject matter of psychology and theoretical physics-chemistry, Chapters IX-XI are directed to proving the existence of noumena. Heretofore, it has been shown, inter alia, that (1) there is evidence that consciousness is not irreducible existent but two-factored resultant; wherefore (2) existence of (consciousness in forma) sensations, evidences existence of the sensation-generating factors, energy and matter²; (3) qualities "of objects" are purely mental, and where irreducible, synonym for sensations; (4) the object is a congeries of qualities and experienced relations, congeries expressive of experiences with the corresponding thing in itself; (5) this congeries is objectivated while other mental congeries are not, because things being real extramental existents, contact experiences

1. Chapters I-V bearing title, Chapters for a Biological-Empirical Psychology, published: Chs. I-III, Am. J. Psychol., 1908, XX, 60-106 (to which references between 60 and 106, relate); Chs. IV-V, New York, 1910, pp. 1-24 (to which references between 1 and 24, relate).

Chapters VI-VIII bearing title, Chapters for a Penultimate Philosophy, published New York, 1913, pp. 201-248 (to which references between 201 and 248, relate).—pagination arbitrary.

Pagination here, similarly arbitrary.

2. Of "nerve" energy and "nerve" resistance, the former an energy species, the latter a matter property, both apparently electrical (77).

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with them, arise only sequent to travel-effort, which is what and all "external" means; (6) the thing in itself is a congeries of properties (is name for that congeries); (7) the physical-mental boundary falls between properties and sensations ("qualities"); and (8) this rectification of boundary, necessitates reestimation of the share contributed to knowledge, from environment and mind, respectively. But our contention that existence of sensations evidences existence of the sensation-generating factors, being based on the fact that a common factor gives rise to different sensations in me and another, supposes prior proof purposely deferred to this paper, that a something other than I exists and includes others like me. Before adducing the evidence, however, scrutiny is necessary of that held to prove noumena nonexistent.

"Among trained philosophers, as among serious though untechnical thinkers, materialism has no foothold, and idealism..... has made good its claims. The truth is that Berkeley gave the coup de grace to all forms of materialism, when he proved, or led the way to the proof, that matter..... is a compound of qualities, and that every quality turns out to be..... a way of being conscious. No arguments brought forward by..... materialists destroy or even assail this basal position of idealism" (400). "The trend of philosophy—as distinguished from the purely popular half-thought—is so clearly toward idealism, that the modern issues lie altogether between one idealistic system and another" (404).³

"George Berkeley, Founder of Idealism",—everybody knows him. But if his work has ever been critically sifted, the text-books show no evidence of it; and not understood by Berkeley, it is not by his followers, while the criticisms of opponents miss the main point. I offer to prove that (1) Berkeley's work is separable into a valid portion, and a portion invalid through and through (circular); (2) idealism is superstructure on the invalid portion; (3) valid Berkeleyism sums to a law valid for the facts it formulates and for no others; (4) the law is nothing but a formula all-inclusive for the mental, and has no pertinency to questions it has been applied to; in particular (5) it does not assert that one cannot transcend his sensations, but does assert that he cannot transcend them directly, and (6) does not assert nonexistence of a reality on jenseits of the individual's mind (does not assert solipsism—but does involve subjectivism), and (7) does not assert the "spiritual" nature of any reality possibly existent on that jenseits (does not assert idealism!); on the contrary (8) valid Berkeleyism is equally compatible with existence on that jenseits, of nothing (solipsism), of spirit alone (idealism), or physical reality alone (materialism), or of both spirit and such reality (dualism), equally compatible because the facts decisive for one or other of those possibilities, are facts other than those of which the law takes account and to which alone it has reference; and (9) where the theologian turned aside to contem-

3. M. W. Calkins, *The Persistent Problems of Philosophy*, 1907, Ch. V. Our Chapters IX-X are a critique of Berkeley's Principles and Dialogues, with incidentally, examination of Calkins's position on crucial questions. This work is selected as on the whole, one of the best of American text-books, representing idealism up to date, from the standpoint of the dominant idealist (Hegelian) school.

plate "all the fata morgana of philosophical dreamland," there the philosopher relinquished to a Joshua whom philosophy still awaits, a next-problem that might have been his own,—decision by a valid methodology, among the possibilities equally compatible with his way-breaking demonstration, decision whether there exists "outside" the individual's mind, any reality at all, and if so, of what nature.

It will appear in the next half dozen chapters, that (a) idealist, realist, and "materialist" invoking the same data and methodology, must all reach the same conclusion (if two conclusions, one invalid, or under different words, both mean the same); (b) idealism and realism involve invalidities; (c) these arise first when after exhausting the valid inferences, idealist or realist will go further, superadding inferences beyond the inference-terminus, on basis of no given; (d) the way this comes about without being manifest, is through enunciation as a single proposition, of what is really subject matter of two separate propositions, one valid, the other invalid; (e) stripped of invalidities, residual idealist contentions and residual realist contentions are found coincident with "materialist" contentions; and (f) these last represent the metaphysical norm, because they precisely formulate, completely formulate, and entirely exhaust the legitimate inferences, and thus mark the inference-terminus. And of energy and matter it is true neither that we know nothing, nor that we know what they are; we do know (and know only) how they behave! Thus, energy is what these behavior characteristics are constitutive for: Constant of sum, and capable of giving rise (under particular conditions) to sensations and interference phenomena. And what is constitutive for matter, is: Selective energy-modifying (absorbing, latentizing) capacity.

The philosophers seem inclined to shirk (Bradley says) escape from solipsism. Yet it was practically this problem that Berkeley by his proof that qualities are the individual's mental, placed at the pivot point of philosophy. For, though he did not prove solipsism (nonexistence of extraindividual reality), he did effectually criticize away the evidence relied on as proving that reality,—and left nothing valid in its stead. So that since then, he who will have a philosophy, is necessitated to start by offering from his own mental experience solely, proof that a something other than he exists,—else are his "external world" and his "fellows," so many "evident" gratuities, and his philosophy has all the value attaching to its guesswork origin.

Accordingly, turning to constructive work and justification of the presuppositions left over from former chapters, in Chapter XI proof is offered from my own mentality solely, of the existence of something other than I, its nature not there coming in question (except incidentally, in places). The proof is found in considerations as to the whereabouts of the psychogenic (particularly the sensation-causal) operation cycle, whether within or without my mental; and especially in the fact that destitute of psychogenic capacity, my thoughts-feelings do, lifelong, influence the character of my subsequent sensations. It transpires that the operation cycle is outside my mental. It follows that I am entitled to accept as real existent,

everything I am able to identify as link in the sensation-causal chain,—everything I can bring to the test of observation and experiment (formula all-inclusive for extraindividual reality, complement of Berkeleyan Law).

This finding is only one of many, showing that while when the talk is only of the static question "where the qualities are," almost any inconclusive argument may "work," when it comes to formulating serial happenings, idealism breaks down, because these are susceptible of full formulation only in terms of imperceptibles causal for the sensible,—reality trans-sensible dynamic constants.

542 E. 79th Street, New York City.

I. THE EMPTINESS OF IMMATERIALISM.

CHAPTER IX

WHAT BERKELEY PROVED AND WHAT HE DIDN'T.

Possibility of science of metaphysics began with Berkeley's qualities-in-the-subject demonstration, but valid Berkeley-ism ended with that. Reality that we know versus "all of reality." Differences between idealist and materialist concern ultimate nature of reality, as to which neither has evidence. As to reality that we know, substantial agreement and diametrically opposite conclusions! This in part due to faultiness of differential diagnosis whereby Berkeley sought to determine nature of reality outside individual's mind. That diagnosis valueless because possibilities brought in as conceivable causes of sensation, no possibilities at all; and philosophic alternative lies between two other possibilities, no-cause and dynamic (non-Berkeleyan) "matter," with respective consequences, subjectivism and "materialism."

"Like" versus "unlike." Mind neither like nor unlike "matter." comparison in common terms not being possible. Criterion of distinctness, incapacity of intergenesis. Introspection yields no evidence as to origin or nature of content; tells only how content looks.

Argument that brain is "idea" and consciousness "function of an idea." An individual's brain neither his own nor any other's idea, and not either parte its constituent matter or parte its infowing energy, idea of God, is not idea at all; and consciousness not function of idea.

As far as idealism is able in reality that we know, to formulate serial (dynamic) happenings, its accounts same as materialism's; but limit is reached beyond which idealism cannot, and materialism alone can fully formulate; so idealism exists only by borrowing material language (did it talk that proper to it, its shortcomings would be manifest); and reality that we know is substantial-energetic (noumenal)—waived (to Ultimate Philosophy) whether there's a rest-of-reality, and what's its nature.

Certainly, possibility of a science of metaphysics first loomed up, when Berkeley demonstrated that the so-called qualities "of bodies" (primary and secondary equally), are purely mental. But all Berkeley accomplished was accurate circumscription of the men-

tal; with his qualities-in-the-subject demonstration, valid constructive Berkeley-ism ends. And the materialist's mistake has been not accepting it frankly; the idealist's, playing fast and loose with it,—waving it forbiddingly every time the materialist tried to transcend his sensations, to "matter," but naively relaxing it when necessary to transcend his own, to "other selves" and "God!" But if Berkeley's demonstration be held to consistently, as fixing the extreme point to which direct consciousness can reach out (all knowledge beyond this, matter of inference), there arises a metaphysics in which idealist results coincide with materialist results, the problems of the ages offer less difficulty, and science is freed from the epistemologist's Damocles blade.

From his demonstration, Berkeley deduced, indeed, a body of spiritistic-theistic pseudo-implications, which has, together with his demonstration, been perpetuated as idealism. But what has floated idealism down two centuries, has been not any validity in Berkeley's further deductions, but the truth of his demonstration.

Though his remaining teachings are thus as valuable as his tar-water talk, several important points come out, incidentally. Thus Berkeley recognized that the only source of knowledge of extra-individual reality, is the individual's sensations. To this, materialists will assent.

Then he realized that in proving all appearances appreciable by him mental in nature and, his mental, he ran the risk of being unable to transcend his sensations to knowledge of an external world. He believed to transcend them by reasoning that since his will proved incapable of causing his sensations, their cause was external to him. That that cause is extra individual, materialists will agree.

Also Berkeley evinced appreciation of a sound methodology in recognizing that the nature of reality is to be determined a posteriori,—through observation by each individual, of his sensations, and inference from the observations. This, materialists will endorse.

And in considering as on a level, all the possibilities entering into his attempted diagnosis by exclusion, Berkeley tacitly admitted that philosophy in transcending our sensations to knowledge of reality, transcends them to whatever turns out to be outside, equally whether that prove to be the materialist's matter or the idealist's God. This, also, materialists will endorse.

Thoroughgoing agreement as to fundamental facts and methodology; diametrically opposite conclusions.— what a situation! Instances will occur showing that the antipodal difference between idealist and materialist, concerns questions as to which neither has evidence; that is: If materialist mean one who asserts that all of reality is nonmental, and idealist one who says it's mental, neither can prove his case. But if materialist is one who says all of reality we know is nonmental, and idealist one who says it's mental, then (1) as far as idealism is able in a particular case, fully to formulate the facts, its formulation differs from materialism's only in words; (2) a limit is reached beyond which idealism is unable fully to formulate, and (3) materialism alone proves able fully to formulate; whence (4) idealism manages to subsist by borrowing material language (did it talk that appropriate to it, its shortcomings

would be apparent); (5) the nature of reality that we know, is substantial-energetic (material)—waiving (Ultimate Philosophy) the nature of substance as we do not know it, and whether there's a rest of reality, and its nature.

Present differences between the warring schools, largely result from the faultiness of Berkeley's diagnosis. There are, he says, three possible sources of our sensations ("ideas of sense"): Spirit; another idea; matter (Berkeleyan matter). We add two; non-Berkeleyan matter, no-cause. For, my sensations representing the last point to which analysis can resolve back one line of content, these might, in advance of demonstration, be finalities in themselves (or might have nonmental antecedents). And these possibilities will be shown to be the only ones, and Berkeley's no possibles at all.

To the "matter" whose existence he denied, Berkeley ascribed: Zenith-nadir difference from consciousness; permanent existence, independent of consciousness of it; passivity, inertness, inactivity. And he asks: "How can..... a real thing which is invisible be like a color..... can anything be like a sensation or idea but another sensation or idea?"—meaning: Mental is so utterly unlike physical, that no one but a stultus could ever think of associating the two (as cause and effect). Raising three separate questions: Is mental demonstrably different from physical; Is Berkeleyan (inactive) matter a possible at all; does spirit as fact cause "ideas?"

ARE MENTAL AND PHYSICAL DEMONSTRABLY DIFFERENT?

Certainly nothing is "like" a sensation or idea but another sensation or idea; but equally nothing is "unlike" one, but another of the same kind; the invisible real thing is neither like nor unlike the color, comparison not being possible,—not as to quality (thing has no quality); not as to property (color has no property). So, Berkeley's contention that consciousness and physical reality are unlike, has no evidential value for their nonidentity. "O, but, you know they're different,"—what are "different;" which of these contentions is meant: (1) Color "of copper" separate existent from real thing-in-itself copper; or (2) color "of copper" separate existent from last link in energy chain which arouses the color sensation? If 1, certainly the color is separate existent from the copper demonstrably nonqualified (Ch. VI). But if 2, then the question is: What methodology suffices for solution of the problem?

Introspection of any given consciousness will, Calkins says, assure any one that it "is not identical with the brain excitation which is its physical correlate. The sensation of red may be caused or accompanied by 'motion and agitation' of the brain, but..... as directly known by us, is not identical with the brain excitation which occasions it. One could not..... replace the term 'color sensation' by the term 'occipital lobe excitation,' as..... if the two terms stood for an identical reality" (65, 66).

Why not, pray? And how can introspection assure any one? The only way one could tell by it, would be in case he were able while observing introspectively the sensation, coincidentally to observe introspectively the excitation. And unable to do so, how can

he pronounce them different? For, unable (if he is unable!) to introspect the excitation, how does he know how it looks, and how know that it is not perhaps just the excitation itself he is looking at, when he is experiencing the color?

That is: If sensation and excitation are the same existent, the idealist case falls; and if not same existent, they cannot be pronounced unlike, comparison not being possible. So, the only sense in which "consciousness is different from energy" has any meaning, is as contention that the two are of distinct orders of being. But criterion of distinctness of order of being is: Incapacity for reciprocal genesis (240). And brought to this test, the evidence is they are of the same order of being.

Canon of exegesis.—Introspection yields evidence only as to the introspectively observable; and in particular, yields none as to what content is, or whence it originates; Introspection tells only how content looks.

WHAT DOESN'T PROVE MENTAL AND PHYSICAL IDENTICAL.

When it's question of having consciousness identical with "matter," the idealist's strenuous in the negative; but when question of having "matter" identical with consciousness, he's as strenuous in the affirmative! Above, Calkins settled that mental and physical are "not identical;" here, though:

Nerve and brain are, Berkeley holds, sensible objects; each reduces to a sum of sensible qualities,—each is hard or soft, grayish or red. "But sense qualities have been abundantly shown to be ideal. Hence brain and nerve are not..... 'material substratum;' and consciousness, if described as function of the brain, is the function of an idea. And if it is claimed that brain and nerve are not mere compounds of sense qualities, that they are also the necessarily inferred causes of ideas, then Berkeley might answer that the cause of consciousness, as inferred, is itself an object of thought and thus within the domain of consciousness" (134).

Of no brain which is anybody's in particular and no consciousness which is anybody's in particular, could the statements hold; two brains and two consciousnesses at least, are involved in the foregoing, which sums to three contentions. I examine A's brain exposed by the trephine; which of these is meant in each five brains contention?

a. A's brain as sensible object,—of me onlooking. A mental existent (my mental).

b. A's brain-in-itself. A transcendental dynamic existent, cause of a, and also of A's consciousness. A physical existent.

c. A's brain as object of my thought (my concept). A mental existent (my mental); but nothing prevents coincident existence of b, with capacities corresponding with my concept.

d. A's brain as object of A's thought. A mental existent (A's mental).

e. A's brain as idea of God (or object in His mind). A mental existent (God's mental).

Contention 1.—A's brain is sensible object,—as sum of sense qualities abundantly shown ideal.

Comment: Here "brain" means A's brain as my sensible object,—if idea (cf. 2), the idea is mine.

Contention 2.—As sum of sense qualities abundantly shown ideal, that brain which is cause of the individual's consciousness, is idea (his consciousness if function of brain, is function of idea).

Comment: Here "brain" means the brain which is cause of A's consciousness,—whose idea is that?

Contention 3.—If brain is claimed not mere compound of sense qualities, but also cause of consciousness ("idea"), answer: Brain is itself object of thought and thus within consciousness.

Comment: Within whose consciousness and object of whose thought, is A's cause-of-consciousness brain? And the last claim I should think of making would be that the "brain" which is sensible object of an onlooker, is the same with the brain which is cause of the onlooked individual's consciousness,—"brain" and brain being as different as—mental and physical.

Reply to Contentions.—The brain which is cause of consciousness of an individual, is not (1) an existent within any other individual's consciousness (forma sensible object or forma object of thought), and equally not (2) an existent within the individual's own consciousness (forma object of thought, sensible object it could not be); and not (3) idea of God.

An individual's causal brain not another's "idea".—Were A's brain as my sensible object, cause of his consciousness, he would be conscious only when his brain happened to be object of my regard; whereas vast millions are conscious whose brains are never any one's sensible object. And my sensible object being my consciousness, it could be cause of A's, only if A's consciousness be a function of mine, which it is not,—A was conscious before I became and after I ceased to be conscious of him; and only as part in certain insane complexes, do we hear that one's thoughts are imposed on him by others.

An individual's causal brain not his own "idea".—Suppose I am A. I think my brain cause of my consciousness, thereupon because object of my thought, it is "within" (part of) my consciousness.—self-refuting. Having now its cause within itself, my consciousness is self-generating cycle,—proved not to be (Ch. XI). Besides my consciousness caused (ex hypothesi) by my brain, could not antedate advent of my brain; whereas, my brain my idea (ex hypothesi) could not antedate advent of my consciousness. And my consciousness function of my idea, that being my consciousness would be function of another idea,—ad infinitum.

An individual's causal brain not idea of God.—A's anaesthetic is withdrawn, he becomes conscious and sees a "green card,"—thereupon, is his brain green? The only proof that it "is" green, is that some onlooker sees it green; does it then, appear green? Considering the countless exposures of brains, animal and human, if brain color fluctuated, dependent and chameleon like, with color emergence in the corresponding mind, so striking a fact could not have escaped observation and record,—safely, A's brain remains for onlookers, reddish. But then, on quality-in-the-thing-ism and quality-in-the-subject-ism alike, idea of God is disproven. For, equally whether A's brain was no-color or reddish, the immediate

antecedent of the green emerging in A's mind, was not green idea of God,—if that antecedent was A's brain parte its constituent matter. No more was it green idea of God if that antecedent was A's brain parte its infowing energy.

That which causes sensations is not "idea".—A sees a circle left half red, right half dark green; but bystanding red-blind B says the circle's a monochrome,—A sees left half red, B sees it green. But no idea is red and also green. Therefore, the something which gives rise to red in A but green in B, is not idea,—and the immediately premental link not idea, that remoter links are idea, cannot be proven.

But neither the individual's own nor any other individual's idea, and not parte its constituent matter or parte its infowing energy, idea of God, A's causal brain is not idea at all,—and his consciousness not function of an idea.

The Berkeleyan dynamics (at loose ends enough) will be discussed in the next chapter series.

"O but, you say consciousness is energy; why not then, energy consciousness?" Some energy is conscious (apparently), not all, and that sensation-causal energy is preconscious, not conscious, follows from its giving rise to different conscious states in different individuals.

IDEALISM MERELY REWORDS PROBLEMS.

But, grant everything claimed; grant brain is idea,—what then? The observations summing to the comparative anatomy, embryology, physiology, pathology of the brain, are purely mental facts (naturally!), and hence as binding on idealism as on materialism! And as replete with implications, and these as insistent for explanation, for idealist as for materialist. On idealism no less than on materialism, idea-brain is composed of visible hence idea-neurons, and these develop out of (Initially) idea-spermatoozon + idea-ovule,—and, what has been accomplished? The problems are back where they were,—those of the dynamics of development. And the crux is: Does development consist in metamorphosis of idea-stage (or quality-sum) A in my mind, directly into idea-stage B therein (that directly into idea-stage C therein, etc.); or in metamorphosis of imperceptible a in ovum, which gives rise to idea-stage A in my mind and also to imperceptible b in ovum, which gives rise (disparately) to idea-stage B in my mind and also to imperceptible c in ovum (etc)? The latter, unquestionably, for (1) practically all embryology goes on without any one's seeing it; and (2) mental states have no psychogenic capacity (Ch. X),—growth phenomena refute idealism (esse greater than percipi). And similarly, mutatis mutandis, for the other sciences mentioned.

"O but, what causes A's ideas is spirit; his brain is manifestation of the power of God".—Berkeleyan extra-individual dynamism, (CXLVIII). Power, unquestionably; what is constitutive for power, is: Capacity for inducing alteration (including sensation-genesis). Put "of God" or His "manifestation," is what we have no methodology for ascertaining. We live on the hither side of the

manifestation, know only it, and it only by inference from its effects, on our sense organs,—and other substances (photographic plate) which in turn affect our organs. Comparison of the resulting data does, indeed, afford evidence that our sensations have a cause, and that this has a certain congeries of behavior-characteristics,—characteristics constitutive for Energy. But though thus able to transcend our sensation to knowledge of the sensation-causal chain, we have no methodology whereby to transcend that chain itself, to ascertain whether it's manifestation,—the trans-causal unknowable.

For conclusions from Chapter IX, see end of Chapter X.

CHAPTER X

THE CROWNING FALLACIES OF IDEALISM:

I. PSEUDO-ESCAPES FROM SUBJECTIVISM:

II. PSEUDO-DEMONSTRATIONS OF IMMATERIALISM.

Experiencing only my thoughts, feelings, sensations, what know I of a jenseits of last?—after circumvallation of the mental, the prior problem of philosophy; and on methodology here, hinges validity of the superstructure. Idealist pseudo-solutions. The Berkeleyan Law.

Berkeley's metaphysics; his qualities-in-the-subject demonstration apart, he got out what he first put in! Pivotal position in his system, of assumption that "matter" is inactive; had to have it inactive, or couldn't prove it nonexistent; believed it inactive because believed it ideal!—his whole system thus a *circulus*.

His implied theses. Falsity of that asserting that in perceiving, the situation includes nothing but the perceived; and of that asserting one cannot think thoughts with which an extramental reality may correspond, not qualitatively but factually.

Esse is percipi: Contingent on inactivity of "matter;" its falsity; percipi not coextensive with esse,—many solutes and most gases, esse non percipi. Reactions of bodies expressible only in terms of non percipi, idealism cannot fully formulate serial (dynamic) happenings. What is strikingly true of gases, equally true of all bodies (percipi not coextensive with esse, etc.); but being for conscious organisms the obvious feature, percipi is by them viewed with distorted cosmos perspective, while non percipi is recognized only after evolution of physics-chemistry.

Successive exclusion of Berkeley's possibles (Ch. IX). "Spirit" no possible: Dictum only activity is spirit, contingent on inactivity of "matter;" and no way in which nature of causal activity can be inferred.

"Another idea" no possible: Mental states destitute of psychogenic capacity.

Berkeleyan (inactive) "matter" no possible: Myth!

No-cause (of sensations) a possible: In advance of demonstration, sensations might be finalities in themselves.

Dynamic (non-Berkeleyan) "matter" a possible: Nothing Berkeley proved, prejudices claims of dynamic reality! Invalidity of Calkins's argument for its nonexistence.

Challenge to idealist!

The foundation data of psychophilosophy (which includes the sciences), are thoughts, feelings, and sensations, in their various degrees of aggregation; and in terms of these, all our "observations" are made. Psychologically (viewed merely as content), all these are on a par, all becoming known in the same way, through emergence in the introspectio-context (Ch. IV). But philosophically, a difference exists, in the antecedent conditions,—not the underlying substrate conditions, but the excitation conditions antecedent thereto. For, sensations are a function of extraorganismal, thoughts and feelings a function of organismal conditions. In terms of their respective offices, sensations are content representative of environmental conditions, thoughts and feelings content representative of reactive attitudes toward (those conditions). But, experiencing only my thoughts, feelings, and sensations, what know I of anything on jenseits of these last? This is, next after the inclusiveness of the mental (qualities and relations mental and the individual's mental), the prior problem of philosophy; and every philosophy which is not to be guessing match must offer at the outset, proof that a something other than oneself exists.

I. IDEALIST "ESCAPES" FROM SUBJECTIVISM.

"I can excite ideas in my mind at pleasure. . . . It is no more than willing and straightway this or that idea arises in my fancy" (Berkeley, Principles, XXVIII). But the ideas actually perceived by sense, have not a like dependence on my will. "There is, therefore, some other will or spirit that produces them" (XXIX).

Queer nonsequitur!—that the only will he knew (his will) incapable of causing the only sensations he knew (his), proves that what causes sensations is—Will. Berkeley would have escaped only had he (1) proved (not just assumed) that sensations have a cause; (2) proved that was not in his mental; and (3) proved it was in other than his mental. Demonstration of existence of "other selves" would, however, have constituted escape.

"We cannot know the existence of other spirits otherwise than by . . . ideas by them excited in us. I perceive . . . combinations of ideas that inform me there are certain particular agents, like myself," which concur in their production (CXLV). When "we see the color, size, figure, and motions of a man, we perceive only certain sensations or ideas excited in our own minds; and these being" in distinct collections, serve to mark out finite spirits like ourselves (CXLVIII).

Fatal! Combinations or distinct collections of ideas, evidence existence of trans-sensational realities,—and this idealism? Yes; idealism when the idealist needs to transcend his sensations; but strictly limited, understand, to the getting of other selves for the Berkeleyan universe. Would the materialist infer that combinations of ideas evidence existence of trans-sensational realities?—his "things" are only ideas, observed to accompany each other; sensations combined, blended, or concreted together—(I, XCIX). Berkeley failed to prove other selves?—he remained fast in subjectivistic trap. He proved them?—he destroyed esse is per-

cipi! "O but, he separated the cases; held spirits existent because active, matter nonexistent because inactive." His proof of inactivity of "matter," was *circulus* (below); and he asserted other selves inactive (this time to prove God's existence),—whereupon, his inactivity argument demonstrates their nonexistence (CXLVIII, where man declared destitute of sensation-inducing capacity). And how much confidence he had in his argument above, appears: "We have neither an immediate evidence nor a demonstrative knowledge of the existence of other finite spirits",—but supposition of their existence involves no inconsistency, there is a probability, etc. (Dial. III).

Calkins offers a solution:

The reasons for believing that I am not the only existent, must be stated here. "In being conscious of myself, I am directly conscious of myself as limited; and to be conscious of myself as limited is to be conscious of other-than-myself by which I am limited. . . . Thus, my consciousness of friend," master, God, is direct consciousness (410, 411).

"Must be stated here,"—this is the evidence warranting the idealist's transcending his sensations:

Anti-idealist assertion.—To be conscious of myself, is to be directly conscious of myself as limited.

Comment: Question-begging consequitur, if "limited" mean: Implying something-limiting (below).

Anti-idealist assertion.—To be conscious of myself as limited, is to be conscious of other than myself (by which I am limited).

Comment: To be conscious of myself as limited, is to be conscious of,—only myself as limited (below).

Anti-idealist conclusion.—Consciousness of friend, master, God, is direct consciousness.

Also, Calkins gave a variant, admitting "solipsism is a sharp horn of the pluralistic idealist's dilemma. To the monistic idealist . . . it presents no unavoidable difficulty. . . . I know myself as limited, thwarted, circumscribed. But one cannot know oneself as bounded without knowing the existence of a boundary; and to be aware of a boundary as boundary one must be aware of a something beyond. . . . In the experience of my narrow, single self, I experience also a somewhat-beyond-myself" (J. Philos., Psychol. & Sci. Meth., 1911, VIII, 452).

Is this idealism?—directly conscious of other-than-onself! How do the above accord with these, also from Calkins:

I am directly and immediately sure, in perceiving, only of the fact that I have sensational experiences. "There is absolutely nothing in the 'things' of which I am directly certain, save of this complex fact of my experience. . . . My other certainties, if they exist, are inferences from this one direct certainty. The material thing then, as directly known," is a fact within consciousness, not independent of it. Berkeley showed we have no right to the argument: Things exist "for I see, touch, and hear them. . . . such things as I am immediately and sensorially conscious of are ideas" (122, 123),—the individual's ideas, fact within his consciousness, we add. Berkeley showed "we cannot perceive any sensible thing outside our consciousness" (130).

But friend, master, God, are admittedly outside the individual's consciousness; can he, then, be directly conscious of what he cannot perceive?

DIRECT CONSCIOUSNESS OF OTHER-THAN-SELF IMPOSSIBLE.

What is got out of the first quotation, is what was put in,—assumption that one can be directly conscious of himself as limited by something else. But direct consciousness (which here means sense perception) ends with: Aware of oneself as limited in passive sense of; Powerless to accomplish desire. Powerless, because something other than himself exists limiting him,—that is no longer direct consciousness; it is inference. Accordingly, no meaning can be assigned to friend (master, God), which will satisfy at once the statement that I am directly conscious of him, and also the statement that he is other than myself limiting me. If friend mean my sensations of (percept of) Friend-in-himself, I am directly conscious of him but not limited by him (by my own sensations),—and am, at any rate, still revolving within the subjectivistic trap, no whit advanced toward exit. And if friend mean other than my consciousness (mean Friend-in-himself), then, while I may be limited by him as dynamic entity, I am (by hypothesis) not directly conscious of him. There is, then, contradiction *ab initio*, between direct consciousness and other than oneself,—what the idealists have been preaching two centuries, as of all the articles of faith of the sect, the central and most sacrosanct.

Limited, thwarted, circumscribed, aware of boundary as boundary, experience (sic) a something other than myself,—all begging question, except thwarted in passive sense of, Convinced of futility of effort; and limited, if that mean thwarted.

Further, why when I press against a wall, am I not as much directly conscious of matter, as when I press against friend, directly conscious of him; also, how can I be directly conscious of pressing against God (how know it is He I am pressing against)? And Berkeley's assertion that in being directly conscious of sensations, what I am conscious of is really sensations or objects in God's mind, is negated by the considerations: (1) I am directly conscious at most of them as my sensations or object; (2) different sensations arising from a common source in me and the color blind, the immediate source of sensations is not-sensation (Ch. IX); but (3) the sensation-causal chain not-idea, not only can I not be directly conscious of, I cannot even infer as to sensation or object conditions on jenseits of the chain; and (4) infinity of adverse chances excludes coexistence of two quality-series (in me, in God), identical term for term, yet separated across a nonqualified intermediate zone (Chs. XII-XIV).

As fact, I am not directly conscious of other than myself. I press against a wall, and experience only my mental,—sensations (of pressure, cold) and constructs (hardness alias impenetrability

allas solidity, and the derived extension⁴), and a sensation series appraising me of arrest of body-progress. But the intensity of each member of this strain-sensation series being a function of degree of muscular effort, and the intensity of each member of the contact-sensation series equally a function of that degree, between each member of the one series and the corresponding member of the other series, arises an association; result, the association-product gamut of the motor-sensory contact experiences (Ch. VIII), which thenceforth represents the experience: Further progress impossible and effort futile. In all this, however, I am (as Berkeley proved) not conscious of anything other than my own mental,—still revolve within the subjectivistic trap.

In one special case, when I press against my skull or patella, I am directly conscious that besides and "external to" the pressing finger, there exists a something pressed upon. Waiving extended discussion, the advantages to idealism are exhausted in the alternative: That pressed upon which I am directly conscious of, is only my mental (my sensations), or else a something other than my mental. The latter is fatal to idealism,—the only way Berkeley "established" that was by claiming that in perceiving everything one perceives (everything he is directly conscious of) is within his mental; whereas here by hypothesis, a something else is perceived to exist. Per contra, if the something pressed upon is only my mental, then its externality to the pressing part, aids no whit toward exit from the subjectivistic trap.

Finally, Calkins's argument may be used (with far greater cogency) the other way round: That through contact with extramentally existent obstacles, the infant comes to differentiate two opposed somethings, one it has control over ("body"), and one over which it has none ("obstacle");—contact experiences a main tributary to ego synthesis.⁵ As one cannot by such methodology transcend his sensations, the resulting universe is what every direct-consciousness (perceptual) universe is, Berkeleyan-Hegelian, universe of objects summing the individual's experiences (including "efforts") with realities outside him,—each object is its Heaviness (for him, lifting) + its Hardness (for him, scratching) + etc. But, as the child learns that body of standardized inferences "the sciences," it replaces such universe by the physicist's cosmos of Counter-Concepts (realities, things), each sum of properties.

We conclude: (1) Equally with the pluralistic idealist, the monistic is fast within the subjectivistic trap, because the facts Berkeley adduced proving qualities mental existents, being facts of the individual's mind, to the extent they prove qualities mental, they (2) equally prove subjectivism, which is (3) the only idealism consistent even among its several parts, but which when all facts of the individual's experience are brought into the comparison, is (4) found in conflict with many (Ch. XI),—note the procedure:

4. "Without extension solidity cannot be conceived" (Berkeley). It should be: Without solidity as extramental dynamic fact (incident of temperature conditions), extension would not arise mentally,—except imperfectly through experiences with liquids.

5. Perhaps linking on to views of Desautel de Tracy and Maine de Biran (in Janet & Seailles, *History of the Problems of Philosophy*, 1902, I, 70).

The idealist first establishes inclusiveness of the mental ("esse is percipi"), that every quality, relation, sensible object, is mental in nature ("ideal"),—establishes that how? In the only way possible: Proving each such object the only mental he has access to,—part of his individual mental. Next, he calls his sensible objects collectively, "universe," and says that's ideal. Meaning those objects collectively, yes, solely because, however, of their proven ideality, and they are ideal solely because his mental (on condition they do not exist severed from him); meaning those objects collectively + residual, new and separate proof of ideality of residual, required! What has been established so far? That everything he perceives (esse, he says!) is his percipi; also, idealism,—but solipsism-subjectivism, strictly. Now, though, the idealist will have it certain realities exist severed from him,—trans-sensational realities: Other selves, God. Yet he expects to retain esse is percipi (compatible with solipsism alone!); and to endow those extra-individual realities with ideality, when his proof of ideality of objects was conditioned on existence not severed from him; but all the while to have no other (no nonideal!) realities,—whereas we shall show that Berkeley's justification for discriminating between spirits and "matter" breaking down, one uniform methodology results in demonstration of existence of "matter" and other selves as special case; and that existence across hiatus, involves impossibility of determining the nature of reality, otherwise than in terms of its behavior-characteristics.

II. IDEALIST "DEMONSTRATIONS" OF IMMATERIALISM.

It will be shown that (1) Berkeley's proof that "matter" does not exist, was sheerest circle; (2) he did not establish esse is percipi, which is directly disprovable (there is esse aplenty which is not percipi); (3) his contention that "matter" cannot be conceived was either truism or error; (4) the non percipi is the cause of the percipi; (5) unable to formulate non percipi, when pushed to formulate dynamic happenings, idealism either breaks down or its account differs from materialism's only in words; (6) no methodology exists whereby we can know what reality is (but only how it behaves); and (7) what science formulates is the routine not of sense impressions (percipi) but of imperceptible inferable cosmos constants causal therefor.

How did Berkeley establish esse is percipi? The only way he could establish it, was the course he took: Showing there is no esse which is not percipi,—that no "matter" exists. In only two ways, could he prove that. He would have proved it, had he shown that when analysis resulted in taking up into the individual's consciousness, quality after quality until nothing remained, no unperceived residue was left; that would have been direct proof,—but his methodology could prove at most, that no perceived residue was left. There still remained, however, one chance, the course he took: To demonstrate that inference that existence of sensations evidences existence of a "material cause" (of them), is il-

legitimate, and follow the demonstration with appeal to parsimony; combination of demonstration and appeal would have been indirect but practical proof.

But the only way he could demonstrate that, was the course he took: Showing that the characters imputed to the supposed "matter" were such as to preclude its being cause,—that it was inactive. Why did he think it inactive?

Grant spirit is the only activity, and idealism follows, tamely enough,—how did Berkeley establish that, though? He would have established it only had he proved that there is no other activity,—arrived at spirit is the only activity as conclusion (from demonstration). Actually, he asserted "matter" is inactive as conclusion, from spirit is the only activity as premise,—how did he establish that premise? By dividing his universe at the outset, into inactive ideas and active spirits, on introspective observation. But then, his methodology limited his proof to, at most: Spirit is the only activity accessible to introspection; leaving the basal presupposition of idealism: There can be no activity inaccessible to introspection,—the very point at issue.

Thus, Berkeley had to have "matter" inactive; otherwise he couldn't prove it nonexistent; he only claimed to do so, because of its inactivity. So that, all his conclusions (his qualities-in-the-subject demonstration apart) were implicit in his initial assumption, spirit is the only activity (with its derivative, "matter" is inactive). Inactivity in the supposed "matter" thus the very Atlas bearing up the entire Berkeleyan firmament, how did Berkeley arrive at its inactivity? In the Principles, inactivity is definitely referred to, 9 times. In 6, no evidence is cited: "We are to understand" (IX); "said to be" (LXIX); the philosophers say so (LIII LXVII, XCI); "hath been made evident" (CXLI). But by collating the others (XXV, LXI, CH), with various statements, it is plain

BERKELEY BELIEVED "MATTER" INACTIVE BECAUSE IDEA.

Everywhere throughout Principles and Dialogues he maintained uniformly, certain theses, here distinctly enunciated and oriented:

I. All the qualities ascribed to bodies, turn out to be only my, i.e., the individual's mental (sensations, constructs).

II. In perceiving, one perceives nothing but those qualities.

III. Therefore, when I am perceiving anything, take from the situation all the perceived, and there's nothing left.

Comment: Nothing perceptible, left.

IV. But III means: Everything I experience is only my mental (in subjectivistic *cul de sac*).

Comment: Yes; because what "experience" means, is: To be conscious of.

V. But my sensations must have a cause.

Comment: Not necessarily (Chs. IX, XI).

VI. My will is incapable of being that cause.

VII. Therefore, the cause of my sensations is outside of and independent of me (escape from subjectivistic *cul de sac*).

VIII. That cannot be a cause which is inactive.

IX. Ideas are inactive. Therefore, they cannot be a cause (not the cause of my sensations).

Comment: Meaning, One idea does not cause another, yes (below); meaning, Ideas do not enter the causal chain and conservation equation, no (Chs. I-III).

X. Every object is literally nothing but each individual's sensations-of (it, his "ideas." Therefore, it is inactive, and cannot be cause (of his sensations),—whence, there is no unperceived causal something outside the mind.

Comment: Entered the juggle!!!

That every object is literally nothing but our sensations-of it ("sum of its qualities"), is on almost every page of Principles and Dialogues (but cf. especially, pars. III, IV, VII, XC, XCIX). And that "matter" (unthinking reality) must be inactive because it is idea, follows from these quotations:

"The sensible qualities are color, figure, motion, smell, taste, and such like, that is, the ideas perceived by sense. Now for any idea to exist in an unperceiving thing, is a manifest contradiction; for to have an idea is all one as to perceive: that therefore where-in color, figure, and the like qualities exist, must perceive them; hence it is clear that there can be no unthinking substance or substrate of those ideas" (VII).

Berkeley does not here prove what he claims to prove. This is part of his qualities-in-the-subject demonstration; and as such has no relevancy to the question: Does there exist extramentally, substrate, not of ideas but of capacities ("energy") causal for ideas. In particular: If "motion" mean idea-of (motion), that that is idea, is truism; while if "motion" mean reality *forma* motion, that being (by definition) not idea, cannot be proved inactive because idea (below),—and Berkeley has established nothing.

In the next, "matter" is first mentioned. Previously, Berkeley has settled that spirit is the only activity. Accordingly "matter" is declared, forthwith and offhand, "inert," word apparently mere harmless emphatic synonym of "senseless;" but soon "passive" is joined to inert, and "inactive" to passive,—result: senseless meaning non-conscious, has come to be inactive in sense of non-dynamic!

All acknowledge secondary qualities exist only in the mind, but they will have it the primary qualities, extension, figure, motion, rest, solidity or impenetrability, and number, are "patterns or images of things which exist without the mind, in an unthinking substance which they call matter. By matter therefore we are to understand an inert, senseless substance, in which extension, figure, and motion, do actually subsist" (IX).

"All our ideas, sensations, or the things which we perceive, ... are visibly inactive: there is nothing of power or agency included in them. So that one idea or object of thought cannot produce, or make any alteration in another. To be satisfied of the truth of this, there is nothing else requisite than a bare observation of our ideas. For since they exist only in the mind, it follows that there is nothing in them but what is perceived. But whoever shall attend to his ideas, ... will not per-

ceive in them any power or activity; there is therefore no such thing contained in them." "It plainly follows that extension, figure, and motion cannot be the cause of our sensations" (XXV).

Because existing only in the mind, there is in sensations, ideas or things, nothing but what we perceive in them; but we perceive no power or activity in them; therefore there is none in them. It plainly follows that extension, figure, motion, ("matter"), cannot cause our sensations,—because inactive because ideas! That this is, beyond question, Berkeley's meaning, follows from other statements crossreferenced to XXV and from Dialogue II.

"Solidity, bulk, figure, motion, and the like, have no activity or efficacy in them, so as to be capable of producing any one effect in nature (see section XXV)"—(LXI).

Appearances are of late "mostly resolved into mechanical causes, to wit, the figure, motion, weight, and such like qualities of insensible particles: whereas . . . motion, as well as all other ideas, is perfectly inert (see section XXV)"—(CII).

There is no cause in the activity that belongs to matter, namely motion; for that is sensible quality, such qualities are ideas, ideas are inactive, therefore motion is inactive,—and that inactive, we cannot conceive any activity but volition (Dial. II).

Comment: Back at end of circle we started from!

Consistency in all this? Reductio ad absurdum. Affirming Cana miracle, if all see, taste, smell, drink, and "feel the effects of" wine, that wine is real (LXXXIV). But "wine" nothing but the percipi, with this inert, there are no effects. And wine actually producing effects, these are, on Berkeley's own showing that the percipi is inactive, result of an effect-producing Imperceptible! "O but, God's Percipi, power of God" (CXLVIII). Of the nature of the causal agent, we can know no more than is implicit in its effects, our sensations. And these allow of inference only that it "is" their cause, with the behavior characteristics: Constant of sum, giving rise to interference phenomena,—and we know, additionally, it is not idea (below).

THE BERKELEIAN CIRCULUS.

Berkeley then believed the supposed "matter" must be inactive, because he was obsessed with the conviction that it is idea. But unless this derivation be refuted, his argument for non-existence of "matter," reduces to this repeated:

1. It is inferred that the cause of my sensations is a non-conscious "reality" outside my (the individual's) mind.
2. But that reality could not be such cause,—because inactive, and what's inactive, cannot be a cause.
3. But if it cannot be cause of my sensations, parsimony forbids supposition of its existence; accordingly, it does not exist,—does not, because not cause of my sensations, because inactive.
4. But the supposed reality not existent, what has all along been taken to be it, is my own ideas,—this, though, only because that reality could not cause my sensations, because inactive.
5. But my ideas are all inactive.
6. Therefore, the supposed reality is inactive,—and lo!—the phantom caravan has reached the nothing it set out from.

Circulus.—Therefore, it cannot be cause; therefore, doesn't exist; therefore, what does exist is idea; therefore, it's inactive,—and cannot be cause (ad infinitum).

Immediately the following contentions of Berkeley are invalidated, completely:

That extraindividual reality (particularly matter, motion) is inactive.

That, consequently, that reality (including, by the way, other selves, by reason of their inactivity—CXLVIII) does not exist.

That, consequently, all that exists is perceived,—esse is percipi.

That, consequently, the fact that anything is thought of, is evidence that nothing exists but the thought-of (it).

And the last three are susceptible of definite disproof, besides. But Calkins while admitting Berkeley was not warranted in assuming "matter" inactive, thinks nevertheless, to resuscitate his argument up to date, and make it cover active matter as well:

"Just as he showed that we cannot perceive any sensible thing outside our consciousness . . . he might have argued that the object of our inference is ipso facto an idea, object-of-consciousness, a mental fact. Thus matter, inferred to exist as cause of ideas, whether regarded as active or as inactive would still be object of our inference," an "idea." The result "is then to discredit his express arguments but to accept his conclusion as a consequence of a truth which he has established" (130).

Which is, we submit, to ignore the basal import for Idealist metaphysics, of inactivity. Assumption: "Matter" as object of inference, must stand on a par with "matter" as object of perception. It's question, however, of have one's choice but not both! One may have "matter" inactive; then (but in that contingency solely!) the cases stand on a par,—"matter" cannot be inferred to exist (as well as not perceived to exist). But make it active, and while it cannot be perceived, it may be inferred to exist, without hindrance! Calkins does not claim independent validity for the argument; it links on to Berkeley's (consequence of a truth he established). Here is the Berkeley-Calkins argument.

- A. Because inactive, "matter" may not be inferred to exist as cause (of sensations).
- B. Not existing as inferred cause, "matter" does not exist.
Comment: Contingent on inactivity!
- C. Because it does not exist, all that does exist is perceived.
Comment: Contingent on inactivity!
- D. Existence as object of inference, must stand on the same plane as existence as object of perception (Calkins).
Comment: It does, only in case of inactivity!
- E. So, because every object of perception exists only as such object, every object of inference must exist only as such object.
Comment: It does only in case of inactivity!
- F. Therefore (sic!), active "matter" is nothing but object of inference and accordingly mental.
Comment: The question is not whether the inferred object (concept) is mental (what else should it be!); the question is;

Does there exist a reality corresponding with the concept, one the concept describes?

Whereas, the only reason it was even claimed that (1) "matter" does not exist; and therefore (2) everything that does exist, is mental; and that, consequently (3) every object of inference is exclusively mental (there cannot be also, a correspondent reality!)—the only reason these were even claimed, was because of the supposed inactivity of "matter," forbidding its being inferred to be cause!

ASSERTION: "MATTER" CANNOT BE CONCEIVED.

"When we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas" (XXIII).

This is extension! First it was, One cannot perceive anything else,—(the perceivable the furthest limit of the introspectively accessible). Now it is, One cannot conceive (or infer) anything else, which may mean: (1) I cannot think anything but my thoughts ("ideas"), cannot think but in terms of them; or (2) I cannot think of anything but my thoughts (cannot think with them as tools), cannot think thoughts with which an extramental reality may correspond, not qualitatively but factually. The first is truism; the second, demonstrably false. The following exemplifies the case:

"It is evident to any one who takes a survey of the objects of human knowledge, that they are" ideas. "And as several of these are observed to accompany each other, they come to be marked by one name, and so to be reputed as one thing" (1).—as apple, stone, tree, book.

In these opening lines we have the methodology (introspection), and specious transformation of problem,—evident objects of thought are ideas, which may mean (1) the thought-of (objects), is idea; or (2) the objects (thought of), are ideas. The first is truism, but does not prove immaterialism; and Berkeley figures as its founder, only because he persuaded himself and others that he proved the second. But that he could have shown only by proving that in perceiving, there is no coexistent imperceptible residue. His introspective methodology, however, was capable of proving at most, that no perceptible residue coexisted. Hence by his methodology, Berkeley excluded in advance, possibility of a solution,—unless he showed that by reason of proved inactivity, "matter" might not be inferred to exist. "O but, conceive a tree; that tree is your mental." If that mean: I imagine (re-perceive, memory-image) a tree as it looked and felt the last time one saw and felt it, that tree is his mental. But Berkeley proved nothing hindering one's conceiving a tree-in-itself, known not in sense terms but only in terms of its activities as these are implicit in his resulting sensations and changes among these,—in its sensation-inducing and growth activities.

ESSE WHICH IS NOT PERCIPI.

1. Colorless inodorous gases are not percipi. In glass steam engine, over water in boiler and in cylinder, you actually see non percipi; see—nothing. Will you assert non esse, because non percipi?—your nothing is, you observe, driving piston in and out. But admit their existence, and if with reality under your very eyes you cannot see it, your failure to see it anywhere, is no evidence (not even presumption) against its existence,—proves only sense-organ obtuseness. And you are all the while combing your hands through ether without perceiving it, because your sense organs do not appreciate the non-viscous (cf. Lodge, Ether of Space).

Not Percipi, what are those gases? What every element (every compound, too) is: Counter-real concept, concept recognitive of a particular conjunction of capacities ("powers"), themselves not sense-appreciable but inferable from their sensible effects. I heat $KClO_3$, and see—nothing; but observe the Hg in the inverted bell-jar sink; glowing match introduced into empty space over Hg, burst into flame, and $KClO_3$ weigh less than at first. Thence, I infer that over the Hg is not "empty space," but a something, "oxygen," one-word summary for: That Which (a) exerts pressure; (b) supports combustion vigorously; and (c) weighs just so much. I heat HCl and MnO_2 ; another something exerts pressure on the Hg and effects on my sense organs (greenish, pungent),—"chlorine." Which, now is the Cl—That Which is greenish and pungent, or That Which exerts pressure (and has other properties); is the Cl what it is, by reason of the percipi or non percipi? Clearly the latter, for: (1) The O is what it is without any percipi; (2) in the Cl, the percipi is not coextensive with the non percipi; (3) the non percipi of the O is homologous not with the percipi of the Cl but with its non percipi, for (4) in both O and Cl, the factor which exerts pressure (molecular vibration) is the factor which gives rise to heat sensation in me; whence (5) color and pungency are inferably due to action of other non percipi (and color is due to selective absorbing capacity); (6) the reactions of Cl cannot be explained or predicted in terms of the percipi; whereas (7) in proportion to our knowledge of imperceptible cosmos constants, is our ability to explain and predict; (8) what is true more strikingly of gases, is true of all bodies (percipi not fundamental, not coextensive with esse, etc.); but (9) by conscious organisms, percipi is because for them the obvious feature, viewed with distorted cosmos perspective, the non percipi being recognized only after evolution of physics-chemistry.

So, when it is said "O supports combustion," and Berkeley comments, You are only contemplating your own ideas he misses the basal constant in the experience: That the fundamental fact in the situation, is not that truism, but the further fact that they are ideas with which corresponds in the O, capacity to keep the fire burning in absence of my and every other consciousness of it, so that returning, I find meat left uncooked, cooked ("chance" come about not through conscious causation). "O but, power of God; not in absence of His consciousness." Well, so long as it's

conceded to be power, power which gives rise to sensations and interference phenomena and is constant of sum, and is not idea (below), it matters not so much what words are applied to it, as we have no methodology for knowing whose power it is (if anybody's). The fire-supporting capacity of O is, in fact, just a "law of nature," can't phrase for: Constancy of properties + constancy of energy sum (the physicist to determine whether these are two ways of saying one fact, or not).

2. Colorless tasteless solutions contain an esse-is-percipi logic, only the sense-appreciable liquid,—disproved by precipitation and crystallization; and coincidentally, esse is percipi.

3. The astronomer photographs stars never visible; their existence is inference only (from positive to developed, that to stars initiating them). And .42 of moon's face is never visible; and the sense-inaccessible interior of bodies (celestial; terrestrial—rocks, plants, animals, furniture) does not exist, or exists only as inference).

4. Neptune existed either only from the moment it was seen or preexisted when perturbations it induced, led Leverrier to infer its existence,—inference and "verification."

5. Certain pathogenic liquids after porcelain filtration, proved free from anything visible under strongest microscope; but virulence remained and persisted throughout successive cultures. Existence of self-multiplying virus was inferred; and later, the ultra-microscope showed particles in the liquids. Here, too, non-perception, merely inferred existence, turned out to be actual existence.

Finally, were esse coextensive only with percipi, all existing percipi must be derived from preexisting percipi; whereas, the water percipi is derived from H non percipi and O non percipi. And brain percipi is derived from spermatozoon non brain percipi + ovule brain non percipi,—esse is percipi died with homunculus theory.

Idealism cannot formulate serial happenings.—These are insusceptible of successful formulation in terms of the resulting sense impressions; but these do not exhaust our knowledge, or even cover the most essential feature in it, knowledge (extra-experiential, inferential) of the constants in the dynamic process. Drop colorless solution of white KI into colorless solution of white HgCl₂, a red precipitate resulting; drop more KI solution, and the precipitate dissolves, to colorless solution. Routine of sense impressions: Colorless + colorless = red; colorless + red = colorless,—which is fact (fact of mental succession), but not specially illuminating fact, the statements having no applicability beyond the particular case. Here, science says: It was not because the solutions were colorless (or solutions of white substances, either), that red precipitation and re-solution occurred; it was because they were solutions of KI and HgCl₂, matter unities (10) possessed of specific effect-making capacities. It is thus to formulations universally valid because expressed in terms of the imperceptible inferred dynamic constants involved, that science is directed. And the sciences are fundamental just as they are able to

formulate in terms of these constants, or only in terms of remote functions of them (compare physics with ethnology).

We conclude that (1) his qualities-in-the-subject demonstration apart, Berkeley's metaphysics was invalid, throughout; (2) Calkins emendations thereto, are likewise invalid; and (3) particularly:

BERKELEY'S POSSIBLES NO POSSIBLES AT ALL.

Berkeleyan "matter" no possible at all.—Berkeley proved such "matter" nonexistent, because inactivity and nonexistence are two ways of saying the same thing. "The schoolmen..... saw (what not all philosophers have seen) that to deny activity to material substances..... reduce them to pure passivity, was tantamount to abolishing them out of existence" (J. Rickaby, *Scholasticism*; 1908, 68).—the only recognition I have seen in desultory textbook reading. At any rate, Berkeleyan "matter" corresponds with no modern concept, in particular not with energy or matter.

"Spirit" no possible at all.—"How can..... that which is unthinking be a cause of thought?" There is good warrant for holding "spirit" one of those chatter-words parroted throughout the slow course of belief-atrophy, until, some day, their emptiness dawns upon all,—words like "phlogiston," as reputable in its day as "spirit" in this.⁶ But as many still have it that spirit is not myth, at least it is just the unthinking that causes consciousness, and it is not fact that "spirit" causes it—

Not fact, if spirit means my consciousness.—For, it was pointed out (18, 19) that if each mental state arose only in consequence of a preceding state, consciousness could not have arisen in the phylogeny, and could not arise, every day, in the ontogeny; also, that sensations do not cause each other, no sensation being followed by a second (third, etc.), except sequent to subsequent stimulation. Further, it was shown by a separate line of considerations (207), that sensations do not cause sensations; and the same will be shown again in Chapter XI, and besides, that my thoughts and feelings do not cause my sensations. Finally, it was shown that the experiences leading to belief that thoughts cause succeeding thoughts, are susceptible of other and better explanation: Route involving stimulation of particular nerve rhizomes, the first thought (of the "train") emerging therefrom, reactively determines further route, with the result that the second thought emerges from its nerve rhizome as the first did from its (224 note 16). No one of the preceding, then, is a case of spirit giving rise to mental states. Not fact, if spirit mean "other selves".—I have never experi-

6. Berkeley merely paltered with "spirit".—we have only our ideas, and have no idea of spirit, still we can have a "notion" of it! Like him, I find only my "ideas," and these include no idea of spirit, and the foggy "notion" of it is merely concept synthesizing such facts as that I have ideas which are, with respect to others' ideas, exclusive and discrete; ideas which include ideas of control over (running into proprietorship implying proprietor of) a material body which is, with respect to other such bodies, exclusive and discrete; and ideas which include that broken sort of "continuity" called memory. And later, the virgin barrenness for explanation, of the "Ego," will be shown (its incompetence to account for the facts of embryology, heredity, etc.).

enced thoughts or feelings attributable to direct action on me of my fellows; my thoughts and feelings concerning them, stand as regards mode of origin, on the same plane as my thoughts and feelings concerning other things I believe to exist,—arise only sequent to sensations of them. Moreover, the way other selves affect the character of my sensations, I observe to be no other than that in which I myself (my thoughts—feelings, i. e.) affect that character,—when I speak, I hear, as when they speak, I hear; if one pricks me, I feel, as when I prick myself, I feel. But the way I affect the character of my sensations, will be shown to be no case of spirit giving rise to mental states, but a reciprocating action of mental and nonmental.

Not fact, if spirit mean God.—Concerning God, consensus of opinion is the only evidence there is; and on one point, agreement is complete: He is not appreciable by our senses,—as fact, He is not sensation inducing. But immediately Berkeley's contention that that which gives rise to my sensations, is God, falls. "O but, Berkeley would today reword his contention, that what you call energy, is really God." Which means: (1) God is energy, when we have an unnecessary synonym, with as objection to substituting for energy, God, the impossibility of freeing the latter term from connotations (Love, etc.); or (2) God is energy + anything you like,—energy is one of His manifestations. But then, "we do not come in contact with God at all,—but only with the energetic manifestation. This, however, we know only through its effects on our sense organs, and those effects in themselves afford no indication as to nature of the causal agent. From further considerations (that a common factor gives rise to different sensations in me and another), I at least know what the agent is not; it is not idea,—and further know nothing. "O but, you say mind is energy; so, on its hither side, energy is Love (etc.), why not then, on its further side too; especially as you admit it to be so in case of your fellows?" Next chapter-series, where a line will be drawn between the cases.

"What can be plainer than that a thing which hath no ideas in itself, cannot impart them to me" (Dial. III).

Logic!—and at its worst. Assumption: A sensation is a cosmic irreducible, passed along unchanged from being to being like a potato; alone among existents, sensations (mental states in general) cannot acquire their character via the process of becoming (critical sequence—Ch. V.),—and:

The fact that something results in red in me but green in red-blind B, proves the sensation-inducing something to be a spirit, who regularly hands out to me my allowance of red, saying to itself: I must be careful now and not get these things mixed up; that Gurley there always gets the red, I know; but I have to be all the time remembering and not let that B get any; he always has to have the green.

The fact that something results in red in me but green in red-blind B, proves each sensation two-factored resultant, proves that the red arises through interworking of the something with one set of physiologic conditions, the green through interworking of the same something with a different set of physiologic conditions,—and

proves the sensation-inducing something itself not sensation, but an X, having the behavior characteristics: Constant of sum, giving rise to sensations and interference phenomena. And for decision of the further separate question, What "is" that which has those characteristics, there is no penultimate methodology.

"Another idea" no possible at all.—For exclusion of ideas from the class of causes, Berkeley relied on introspection's showing them inactive. We have added evidence (above).

CONCLUSIONS FROM CHAPTERS IX-X.

Valid Berkeley-ism.—Berkeley saw there was no warrant for allocating secondary qualities to mind but the primary to things. This, his qualities-in-the-subject demonstration, represents accurate circumscription of the mental; and the line of thought leading up to it, constitutes about the only constructive contribution to a sound metaphysics by the philosophers,—the rest has come from the sciences.

The Berkeleian Law.—All qualities, all percepts, and all relations,⁷ are mental; and are (together with his thoughts and feelings) exclusively and discretely, the perceiving individual's mental.

This is formula all-inclusive for the mental. It sums the spirit of valid Berkeley-ism; and the evidence back of the second part, is the same as that back of the first part. But Berkeley was guilty of gross inconsistency. When it was question of getting rid of "matter," relativity to the individual minds, of qualities and percepts proved these to belong not to that common to all, but to that particular to each (to the respective minds). "Matter" got rid of by help of relativity, however, Berkeley found no difficulty in accepting qualities and percepts as extra-individual existents, so he might have them ideas or objects in God's mind. But, given that red-blind B sees as green what A sees as red, what that proves is: Non-existence of the qualities in that which is common to both,—non-existence, as much if the common something be green and red ideas of God, as if green and red qualities of "matter."

Invalid Berkeley-ism.—But Berkeley went further and asserted that in perceiving, the total situation includes nothing but the perceived. His whole system is development of this doctrine, which was conclusion from an initial "let it be granted." That the only activity is "Spirit",—with its complement, "Matter" is inactive. His assertion granted, Berkeley easily proved what were implicit in it: That "matter" does not exist; that Percept is coextensive with Esse,—both demonstrably false.

To determine the nature of the reality outside the individual's mind, Berkeley got up a diagnosis by exclusion, valueless because the possibilities brought into it were no possibilities while the actual possibilities were left out. So, taking up problems where he went astray, we carry forward (to Chs. XI et seq.) consideration of the possi-

⁷ Relations are only mentioned casually by Berkeley, and occasionally; the modern emphasis on them came up after his time.

bles no-cause and dynamic, i. e. non-Berkeleyan "matter" (energy + matter), with their respective consequences, subjectivism and materialism.

En somme: Nothing Berkeley proved impugns scientific methodology, inference from sense effects back to the sensation-inducing causes; or scientific concepts recognitive of those causes. But one truth Berkeley did establish, irrefutably: The world of causes ("reality"), is not formulatable in terms of the individual's experiences (of qualities, relations). So that, from his time on, representation of reality in those terms, should have been reprehended as on a par with demonstrations of perpetual motion,—not to be tolerated even as fictions, concessions to minds incapable of understanding save in perceptual terms. But alas!—this is not yet recognized, even today!! Many causes have doubtless contributed; but two are noteworthy. Berkeley linked his demonstration with an impossible metaphysics, rightly rejected,—and with it went his demonstration. And mechanics which has exercised a dominant influence upon scientific concepts, took its rise in an age of ponderous geometric construction; had its advent been delayed, it might have developed far more healthily, as an algebra of the environmental existents, of matter-energy quanta. Waiving present discussion of this, nothing Berkeley proved militates against (on the contrary, the epistemologic way is clear for) such inferences as that interference phenomena prove the existence trans-sensationally, of,—well, what? Not "wave motion" if by that you mean the visible-tangible water waves; but wave motion if that mean: Something which is of the same order as the something which gives rise to the visible-tangible water waves,—whatever the latter something be.

CHALLENGE TO THE IDEALIST.

That he either deny *Esse* to the sense-inappreciable gases (as not *Percipi*, but only inference from their sensible effects); or accord *Esse* to energy and matter (as though not *Percipi*, still inference from their sensible effects); or else show in what the case of energy and matter differs from that of those gases.

That he say whether sense-inappreciable dissolved substances, never-visible stars and 42 of moon's face, and the sense-inaccessible interior of bodies, exist,—or do bodies consist of only their "surfaces," how thick are these, and do we make new world or only discover preexisting world, in sinking mines? And say whether Neptune leaped into being when first seen, or existed before, when perturbations it induced led Leverrier to infer its existence; and whether filterable virus came to exist only when revealed by the ultra-microscope, or preexisted when killing people though only matter of inference?

If he say "They preexisted, as God's *Percipi*," the idealist is asked (1) how he justifies his assertion? Berkeley only claimed (cf. e. g. Dial. II) objects to be God's *Percipi* because they were *first* of all, his own. Where, then, there is no question of *Percipi* of ours at all, where is the basis in fact, from which to infer God's?

And he is asked (2) how he knows what the extra-individual realities "are?" All I know directly as to them, is their effects,—my resulting sensations. I cannot, accordingly, perceive what they are (not be directly conscious of other-than-my-mental). And I cannot infer their nature; at most, I restate the facts in terms of causation:⁸ Each reality is, That Which gives rise to those effects,—and experiencing different effects, I infer different That Whiches. But the That Whiches are, generally, "matter." Saying the realities are "material," is, then, merely restating the facts once more,—so that, substantialism exactly represents them (because rewording of them). It, moreover marks the inference-terminus,—point at which facts and inferences from them, become exhausted. When, then, the idealist will make the further and separate assertion, that matter "is" God, I answer: We do not know what it is, but only how it behaves,—the possibilities of may-be being infinite, it may "be" anything (God, or only just finality in itself).

But finality in itself is all we can know it to be; were it over and beyond that, God's *Percipi*, we could not know the fact. For, then we should know it only through its effects, our sensations. But in these we cannot perceive, and from them cannot infer its nature, but only that it "is" That Which (gives rise to the effects).

"God's *Percipi*" is, then, empty words. And if *Esse* is *Percipi* shall not be empty too, the *Percipi* is the individual's. But *Esse* co-extensive only with his *Percipi*, "matter" does not exist; but no more do those other selves and God,—involved back into subjectivism!

So, whipping the philosophic devil round the metaphysical stump, does not really get more out of facts than is in them. And we ask that the idealist deny or admit this: Berkeleyan idealism was no more than a mathematics, body of consequences from an initial supposition,—that "matter" is inactive. Also, we ask that he say what "matter" shall be for him, active or inactive; and that having made choice, he accept frankly all the consequences involved, and not pick the palatable ones,—and then the palatable ones of the choice he didn't make! Here are two sets of alternatives, all the elements in which go together; one can't nibble his preferences:

1. "Matter" shall be inactive? It doesn't exist. All that does exist, is perceived,—by the perceiving individual (*esse* is his *percipi*!). Idealism's his securest possession; but it's solipsism, strictly,—no meretricious sociable text-book "we."

2. "Matter" shall be active? It exists, as inferred cause (of sensations). *Esse* is *percipi*, is false. Existence of other selves, special case of existence of material things.

A. Sensible object part of you? It is ideal, *esse* is your *percipi*, and you are solipsist.

B. Sensible object severed from you? *Esse* is *percipi*, is false. You can't prove ideality of sensible object (your proof of ideality was contingent on existence not severed from you). And

⁸ Admitted by idealists in claim that sensations have their cause outside the individual (route of attempted escape from subjectivism).

if you break out to other selves and God, the materialist gets out to energy and matter.

Idealist and materialist proceeding from the same data (individual's sense-data) by the same methodology (inference), with observations accurate and inferences valid, both must reach the same conclusion! And they do!—as to Reality-that-we-know, complete agreement; divergence only afterward, when idealist goes further, guessing in the void, beyond inference-terminus (on basis of no given).

To the stock charge that the materialist is theorizer ("assuming" unperceivable "unprovable" substrate); To the extent idealist or materialist accounts for sensation-genesis, he is (both alike and equally), theorizer; and if the idealist is not, it is that he does not account for that genesis. But that accounted for, the materialist halts,—the idealist is, thenceforth, the only theorizer.

From the outset, idealism lacked basis; there was nothing in Berkeley's results to warrant the vogue it has had. And had it happened to run counter to dogmatic desiderata, would it, think you, have had such vogue?—Berkeley said very frankly (CLVI), its chief value in his eyes was its availability for the confounding of idolaters, Manicheans, materialists, Socinians, and such like evil folk,—ad maiorem Dei gloriam (extra-metaphysical consideration). We register a prediction: The future will not take idealism seriously, for all its present flourishing appearance (result largely of its dogma-propping value); nevertheless, it will for that value, persist despite disproof, throughout the course of the belief atrophy we have at last definitely entered upon,—witness since my boyhood even, evaporation of the Devil and crumbling of the Trinity.

An independent and acute thinker, Berkeley nevertheless lies, for sins the result of confessed theologic bias, on the philosophic Nebo, within view of the Promised Land. Yet might he, as many another master, address to his error-cherishing followers, those biting words of Zarathustra: "One ill requiteth one's teacher by always remaining his scholar. Why will ye not pluck at my wreath?..... Ye say ye believe in Zarathustra? But what is Zarathustra worth? Ye are my faithful ones; but what are all faithful ones worth? When ye had not yet sought yourselves, ye found me. Thus do all faithful ones; hence all belief is worth so little. Now, I ask you to lose me and find yourself."

II. THE EXISTENCE OF ENERGY.

CHAPTER XI

THE ESCAPE FROM SUBJECTIVISM:

PSYCHOGENIC SUBSTRATE OTHER-THAN-MY-MENTAL.

Existence of reality problem for each, separately. Solipsism idealism's strongest case; but insusceptible of proof, and requires individual's mental be self-generating cycle.

Mental no cycle, but a progress. Interflow of physical and mental, like movement along figure of 8: Mental begins at critical intercrossing on upmove; continues along upper loop; and at intercrossing on downmove, vanishes (particular progress vanishes); and interregnum corresponding with extramental operation cycle begins, continues along lower loop, and ends by arousing sensations (beginning of new progress).

Though thus separated from subsequent sensations by interregnum, my thoughts-feelings influence, lifelong, character of those sensations,—that solipsism be true, influencing cycle must be in my mental; is it?

Operation cycle not in my thoughts-feelings. They cannot create, modify, or suppress, my sensations-percepts.

Operation cycle not in my sensations. Usually unrepresented in my mental, where cycle is represented by sensations, these are purely incidental (cycle going on equally whether represented or not) and have no sensation-generating capacity (are not influencing factors).

But not in my mental, operation cycle is either in other than my mental, or in nothing at all and does not exist, when my sensations arise without source, which demonstrably they do not,—operation substrate is other than my mental.

What distinguishes the physical: One is entitled to accept as real, everything he is able to identify as link in the psychogenic operation cycle,—criterion of extraindividual reality and formula all-inclusive therefor (complement of Berkeleyian Law).

Confirmatory: In perceiving, total situation contains besides perceived, unperceived residual having sensation-generating capacity. Also, operation cycle extraexperiential because existed before advent of, exists in absence of, and persists across gaps in my consciousness. And discrepancy between my sensations-percepts and thought-feeling progression, renders my mental as sole existent, unintelligible,—but explicable as function of something not itself.

Solipsism thus disproved because individual's mental no self-generating system. And hypothesis 3 (my mental and something else coexist) established, because (1) I have now all the evidence of existence of something else, that from nature of case I should have, if that something existed; and (2) hypothesis of its existence accords with and accounts for all facts, and is of exhaustive trio of hypotheses, only hypothesis so according and accounting.

Unintelligibility of mental, *reductio ad absurdum*. Hypothesis 2 invalid, because I now having all evidence I could have if something else existed, refusal to infer its existence repudiates entire inference "process",—my mental itself become unintelligible.

When analysis has resolved a group of facts down to irreducibles (here, mental content to sensations, and other), the problem that arises is: Are these basal irreducibles finalities in themselves, or do they stand in connection with the facts of the abutting group (here, those summing to "physical reality")? Of group junctions between facts seemingly incommensurate, the cosmos offers a single instance, the mind-brain junction, though for aught we know pro or con, ether-energy might or might not be the accessible face of a second,—the inaccessible face would be a Hyper-Cosmos (God or what not). Waiving (to Ultimate Philosophy) a Hyper-Cosmos inaccessible to scientific methodology (even if existent), the net result of Berkeley's valid work was three next problems, each separately determinable: Does my consciousness afford evidence that a something else coexists (or am I the only existent); if yes, what is the nature of the something; are it and I wholly disparate, or do it and I interact? This chapter deals with the first; what is the question? Given that I believe a something else coexists, and given that I have never had anything but my consciousness to base the belief on, required to precise the data of this, which justify my belief. Demonstration of this problem marking the second philosophic milestone (Berkeley's showing of the fundamental initial data of metaphysics, marked the first), that it may be solved, I shall bear with equanimity the reproach of demonstrating twaddle everybody admits, "knows" (really, guesses), knowing but one way to settle questions: Take them seriously, and prove points, seriatim. And the more equanimity, that no evidential value attaching to consensus in the high places, of mere opinion, in his philosophy one can today appeal to only those facts he has himself demonstrated, from the bottom up. Also, I shall not worry over the number of capital I's. Had each philosopher said, I (instead of the flabby "we") know; and immediately asked himself, But do I know, philosophy had gained in fundamentality,—at expense of pagination. Metaphysics is a capital-I subject. Can "we" know anything exists outside "our" minds?—there is no such problem!! Until I have first settled that something (including, it may be, a you-something) exists "outside" my mind, there can be for me, no "we"—and no philosophy (only subjectivistic psychology). And when there has come to be a "we," the question has been already settled (begged!)—and with it, begged, in some coveted direction, the separate question of the nature of reality. But the only problem is: Do I know whether a something exists on jenseits of my mind; and in the solution, my mental is, perforce, sole and final referendum.

Hypothesis 1.—I know my mental exists; I know a something else does not coexist (solipsism).

Hypothesis 2.—I know my mental exists; I do not know whether a something else coexists (subjectivism).

Hypothesis 3.—I know my mental exists; I know a something else coexists.

Hypothesis 1 is insusceptible of proof. Since evidence of non-existence cannot be adduced (but at most, lack of evidence of existence, if my consciousness existed alone, demonstration of the fact by me, would be impossible. So hypotheses 1 and 3 stand on an exact par (par of may be), unaffected by admitted existence of consciousness; and 1 cannot rise above a may be. The only way, indeed, solipsism could be made matter of legitimate hypothesis, would be by evidence that it is the only hypothesis according with and accounting for the facts; whereas, it is in conflict with many facts.

Berkeley showed the worthlessness of such pseudo-evidence as, I know things exist because I see or experience resistance from them,—what one is directly conscious of, is nothing but his mental. But Berkeley did not prove the mental a self-generating cycle, and if it is not, solipsism is false,—the immediate question. Solipsism, however, is the only consistent idealism!—make a hole for egress of the idealist cat to other selves and God, and the materialist kitten sneaks through too, to "matter." And the only way Berkeley even claimed to have other selves and God while not having "matter," was because of his assumption that "matter" is inactive (Ch. X).

I. THAT MY SENSATIONS HAVE A CAUSE.

Assuming nothing and proving as we go, are there data decisive as between these possibilities:

My sensations have no cause and are finalities in themselves; for, their order and frequency of occurrence are determined within themselves and are in particular, independent of my previous mental.

My sensations have a cause and are not finalities in themselves; for, their order and frequency of occurrence are not determined within themselves and are in particular, not independent of my previous mental.

As fact, order and frequency of occurrence are not irrespective of my previous mental. No fact of my successional mental experience is better established, than that following my thoughts and feelings, my subsequent; sensations are continually different from what they would otherwise have been. That is: It is fact of my successional experience solely, that if "I" have certain thoughts and feelings, as of desire or aversion, along with these do go "efforts" on my part, directed toward recurring emergence of some or avoiding emergence of other sensations; and further fact that these efforts take the form of activity of "my muscles";—and:

This is the crux between materialism and idealism. That the latter's solipsistic form be true, each mental state must have as source (cause), the preceding state⁹, there being (ex-hypothese), no other possible source,—mental must be self-generating cycle,

9. Genesis of mental state B from state A, of state C from B (longitudinal or intramental causation), in contradistinction from genesis of state A from brain-state a, of state B from brain-state b (transverse or physical causation).

whereas demonstrably no cycle exists. The mental appears to be a cycle, only because it is at each step, a function of an extramental operation cycle, whose existence is proved, for us, by its mental (particularly, sensational) effects. And no immaterialism can give a full account of how it comes that mediately my thoughts-feelings and immediately my muscular activities, result in change in my sensation status; pushed to give full account of that how, immaterialism breaks down into *reductio ad absurdum*.

That, now, my thoughts and feelings do, as fact, involve difference in my subsequent sensations, is proved by countless facts. I wish not to experience an object (snake),—desire to avoid emergence of that sensation complex¹⁰. I will see "Hamlet",—determination that among the states making up my mental life, there shall emerge certain sensations-percepts (theatre, audience, actors). But, as fact of my mental experience solely, emergence of these will ensue, only if I previously secure emergence of certain other sensations,—I must get "tickets." Emergence of ticket sensation complex will, however, ensue only if I first secure that of the money complex (etc.). Innumerable variants will suggest themselves; indeed, efforts to change direction of my thoughts-feelings apart, the entire concern of my mental life is with efforts to affect the character of my subsequent sensation-genesis!

So that, order and frequency of occurrence of my sensations, is not irrespective of my previous mental; that enters as factor in their genesis; and my sensations are not uncaused finalities in themselves,—equally with all else we know, they are results in the causal chain. And the crucial question is: Where is the operation cycle; are all the above operations mental transactions merely, or does there come a stage at which the cycle breaks down, unless recourse be had to other than my mental? The answer is not doubtful; but here note that in so far as immaterialism is able to approximate to a full account of how my thoughts-feelings influence the character of my subsequent sensations, its account differs from materialism's only in words,—and exceeding clumsiness of its description. So, talking the immaterialist's language, does not advantage him any, change of words not changing problems; and the present one is: Where is the sensation-generating operation cycle?

tion),—genesis of content increment after increment, from successively stimulated nerve rhizome.

And when Bergson complains that analysis of content results in artefacts, gives, which one cannot synthesize the original unity of thought, that depends on how the analysis is done. Recognize that the mental ultimates are the briefest states appreciable (13), and there is no difficulty in synthesizing them back to the original unity,—that "unity" is mere repetition to point of fusion (accomplished, for sensations, on the color mixer). And we ask: Given that repetition of intermittent green results in "continuous" green, if all mental states were fusions of longitudinally juxtaposed fractions, in what science would more evidence of the fact be demanded, and what more or what other kind of evidence could be furnished, than just that we already have,—experimental demonstration that repetition of fractions actually results in synthesis to the original unity!

10. Determined to shun everywhere discussion of problems not in immediate question, I have used this term all along, as good enough for current purposes with intention to show (in chapter on Perception) its inadequacy as complete explanation.

II. OPERATION CYCLE NOT IN MY MENTAL

OPERATION CYCLE NOT IN MY THOUGHTS-FEELINGS.

1. My universe uncreatable by me.—On solipsism, my Fichtean ego has created my "universe" of objects," which, however, cannot be, since as fact, I cannot create a single content of the sensation order.

On solipsism, how is it I can elicit as sequel to mental successions ("by mental operations") falling entirely within the thought hemisphere, certain content ("trains of thought"), yet try as I may with the same "operations," cannot hallucinate a sensation, emergence of this occurring only sequent to an operation cycle which is with respect to my thoughts-feelings (at any rate), an independent variable,—intelligible if one factor in sensation-genesis is independent of me (intelligible on abandoning solipsism). Thus, image green as hard as I may, I do not see green. But, if my consciousness be the only existent, why does not establishment in it, of the connection, suffice to bring about emergence of the desired sensation? What more is needed, and what more in what, seeing there is nothing else? and why is it just sensation-order content I cannot create?

Experiment 1.—Solipsist I imagine (think out) this situation: I am lying prone, with my non-existent "back" bare, with suspended over it, a bundle of my sensations called "knife," by another bundle called "cord," with a lighted "fuse"—bundle tied to it,—I shall soon experience a sensation (and wait for one till patience gives out).

In the solipsistic silence, hallucination: "O but, you didn't really believe you'd put anything up there." I really believed I had posted a letter, and looked for the reply; none came, and I found letter in my pocket. But if my consciousness be the only existent, why did not establishment in it, of the connection suffice to bring about emergence of the "reply" sensation complex. It was not that I failed consciously to realize the details of the operation cycle (features of postman, etc.); for, emergence of the reply complex ensued, only following my completing the operations finding mental expression in the post-the-letter tactile-visual sensation series, though in posting it, I put it out of my power consciously to realize those details.

My thoughts-feelings have, then, no capacity for generating sensations directly. Accordingly, solipsism breaks down and is incapable of fully formulating the facts,—incapable of explaining how an introspectively observable cause (individual's "will") ends by accomplishing an introspectively observable result (difference in his sensations), incapable because substrate of operation

11. Henceforth "universe" will be specialized for the sum total of sensation-order content, with as antonym, "cosmos," denoting the total of the thing-in-itself series, and substance-energy generally,—the physical sphere. The mental sphere falls into an objective-sensational hemisphere, and a thought (thought-feeling) hemisphere.

cycle¹², is other than the introspecting individual's mental. But how the mental can reactively determine preferential discharge on to the muscles, and through their activity, influence subsequent sensation genesis, has been shown (Ch. III; and 224 note 16).

2. My universe unmodifiable and indestructible by me.—I can, not modify or obliterate existing content of the sensation order.

If I am experiencing sensations, I am experiencing them, cannot but experience, or experience more or less intensely. And if I "see" a table, I see it, and cannot think myself out of seeing it, or into seeing it other than as it appears.

3. My universe does not grow old with me.—Were the operation cycle in my thoughts and feelings, it would change with their change, and the resulting sensations change with its change; whereas, sensation-order content is just the one unchanging feature in my mental life.

There being on solipsism, no extramental constant inducing sensations, why is it sensation-order content only, that has remained unchanged throughout my whole life,—why is "green" still green, "square" still square. This is intelligible, indeed, through realization that permanence of that content is incident of genesis between two permanents (two invariables), environmental moments and nerve resistances in sensation area (Ch. III), the latter derivative invariable in adaptation to former, corresponding to unvarying need for optimum motor response.

4. Lacuna between thoughts-feelings and sensations.—Culmination of the desiring thoughts-feelings and emergence of the desired sensations, are not coterminous; between culmination and emergence, there is always mental hiatus, corresponding to the extramental operation cycle. The hiatus may be (usually is) filled in mentally by content extraneous to the particular thoughts-feelings and sensations (content forming part of independent concurrents¹³), and especially by sensations apprising of the workings of the operation cycle, sensations which are precursors but not generating factors of the desired sensations (both sets of sensations being coordinate results of that cycle).

Desiring information from France, I wrote (culmination of desiring thoughts-feelings, in "effort") and posted a letter (initiation of extramental operation cycle), and then experienced a gap filled in mentally by many extraneous states, as cyclical recurrences (sun's risings and settings), each with many minor interpolations ("meals," etc.). I desired a pencil, stretched out my hand and got it from desk before me. The number of extraneous interpolations thus varies from countless to few, but whether many or few, depends solely on number of operations involved.

12. No operation resulting in return to the original condition, it should be operation *apral*. But at least "cycle" emphasizes return into the mental, following disappearance from it, after a beginning within it.

13. K. Dunlap (*System of Psychology*) likens the mental to a rope, which everywhere a "whole," is nevertheless, continually changing, through the running out of individual strands and entering in of new ones, the "rope" being at each stage, the sum (cross section) of the then existing strands. The point of the simile is that the mental is no unity, but an ever-shifting aggregate of independent variables which are nothing but concurrents (18, 19).

The mental is thus a progress, not a cycle; and interflow of physical and "mental" (physical viewed under anomalous—introspective—conditions), is like movement along figure of 8. Mental begins with emergence of sensations, at the critical crossing of loops on the upmove; continues, with emergence of the desiring thoughts and feelings, throughout the upper loop; and then vanishes (the particular progress vanishes), at the critical crossing on downmove,—and the mental interregnum corresponding with the extramental operation cycle, begins, continues along lower loop, and ends with arousal of the desired sensations (beginning of new mental progress). To the bridging operation cycle, may correspond mentally, sensations apprising that and how the cycle is working; but these are with respect to both the desiring thoughts-feelings and the desired sensations, purely adventitious, and to the last at most precursors. Thus, wishing to get a prick sensation, I approximate a needle to my finger, seeing every stage up to complete approximation. But capacity to arouse prick, is not in the visual or the concomitant tactile sensation series; it is in only the needle-approximation series. And only to the extent successive stages of the sensation series are indices of stages in the approximation series, have they reference (indirectly through that series) to their successors, the desired sensations.

So, the mental plotted on a circle, will not fill the whole circle; and the lacuna across from mental termination to new mental beginning, proves the existence of a complementary something which is not my mental, bridging the gap and affording substrate without which my desiring thoughts-feelings could not affect the character of my subsequent sensations.

OPERATION CYCLE NOT IN MY SENSATIONS.

Experiment 2.—Solipsistic I tell a bundle of my sensations: "John, lie up over this bundle I call 'my back,' that bundle called 'knife,' by this one called 'cord,' with lighted 'fuse'-bundle tied to it." I do not know, now, what nonexistent John tied up; but the result is given not in my knowledge or ignorance (establishment or nonestablishment of connection in thought hemisphere), but in conditions entirely independent thereof, established by sensation-bundle "John,"—if knife, one sort of sensation; if feather, another sort (etc.). And when the suspensum falls, it will turn out to have the same specific effect-making (including sensation-inducing) capacities, whether called "material knife" or "only sensations." So, calling it "just sensations," does not affect (1) its nature, or (2) the problem, which is the dynamic one of sensation genesis, which discloses an operation cycle on jenseits of my thoughts-feelings. And the immediate phase of the problem, is: Are sensations possessed of sensation-generating capacity, and so capable of entering as factors, in the operation cycle which dated from my desiring thoughts-feelings? If so, Experiment 2 is (at least may be) accurate statements of the facts, John then being what solipsism says he is, my sensations, these possessed of

sensation-generating capacity. But if not, the case is *reductio ad absurdum* for solipsism,—that having been granted, it transpires that an agent which is not my mental, exists. As fact, now, sensations have no such capacity; not they, but a factor in their genesis, brings about emergence of the desired sensations,—and of the cycle-representing sensations en route thereto, as well.

Thus, my mental succession solely proves that (1) my thoughts-feelings influence the character of my subsequent sensations, when (2) those thoughts-feelings have no psychogenic capacity; (3) my mental exhibits in correspondence with the sensation generating operation cycle, a hiatus,—so that (4) that cycle is not in my mental.

III. OPERATION CYCLE IN OTHER-THAN-MY-MENTAL

I. When I am perceiving anything, there is in the total situation, more than merely what I perceive; so that, if "object" denote the aggregate of the perceptibles, the situation includes over and besides these, an imperceptible non-object residuum, having sensation-inducing capacity.

I see "a desk;" touch it, experiencing pressure sensations, and strike it, experiencing pain sensations.

Hylus:¹⁴ Just what, Philonous, is this desk? Philonous: "O, sum of its qualities." Hylus: But Philonous, that is not the problem. Actually, I experienced successively, visual, pressure, pain sensations. Demonstratedly, my pressure and pain sensations had a cause. Here, that was either the desk, or my preceding visual sensations. Demonstratedly, though, these have no sensation-generating capacity (Ch. X). Hence, "the desk" covers two existents: My sensible-object desk; and an imperceptible something possessed of sensation-generating capacity,—capacity for giving rise to the pressure-pain sensations, as initially to the visual. The problem is thus the old one of the dynamics of sensation-genesis, as to which I pretend to know no more of the desk than that it is the initial source of my sensations (modifier of photogenic waves selectively, so I see desk, not cat); and no more of the immediate cause of them than that it is: That Which is non-ideal, constant of sum, and gives rise to them and interference-phenomena. Be pleased, therefore, Philonous, to resolve my doubts on this point. Philonous: "I confess, Hylus, I hardly know how to answer...." (mss indecipherable, but the numerous living Philonousides, can easily furnish an answer). The sensation-generating operation cycle is, thus, in other than my mental.

Also, where two existents agree in percipi, if what is perceived be all that exists, then, the two total situations must be identical. Polarized light and ordinary light agree in percipi (look just alike). Nevertheless, the respective total situations include different further sensation-generating capacities,—even on its own logic, esse is percipi self-refuting.

14. Fragment of projected Fourth Dialogue, presented by Berkeley to Rhode Island forebears. The writing in this Matchless Hairloom, has a trick of becoming conveniently indecipherable.

II. When I have perceived anything, and there is then taken from the total situation, my entire consciousness of it, there nevertheless remains a something, having sensation-inducing capacity.

Repeatedly, I have knocked against some "object," only to remember that I placed it in that situation, and then forgot having done so. But then, entire disappearance from my consciousness (perceptual field and memory alike), of the object, did not involve its annihilation; something remained, having capacity for sensation-genesis, operation cycle in other than my mental.

III. The operation cycle is in other than my mental because it persists across gaps in my mental.

It is dark; I sleep, wake, and find it light. But my new light sensations demonstratedly did not arise in consequence of my previous dark sensation. Either, then, they come from nothing (without cause, disproved above), or something possessed of sensation-generating capacity, persisted across the intermission in my conscious progression,—operation substrate other than my mental. And the same applies to "change" come about during a half hour's coma (waking with different persons around me, etc.), and to that during general anaesthesia (anaesthetized on table, waked in bed, etc.).

IV. The operation cycle is in other than my mental because it goes on in my unconsciousness of it.

I see animals born and plants sprouted at advanced stages of operation cycles of whose existence I was unconscious; first see houses and ships when completed, etc.

V. The operation cycle is in other than my mental because it is not coterminous with my mental.

Many of my percepts correspond to an operation-cycle more advanced than would be possible had the cycle commenced with my advent. I have, e. g., seen trees grow in my lifetime, to several inches in diameter. But my earliest recollections include experiences with trees already feet in diameter. The operation cycle through which these had origin, was, consequently, in other than my mental. And the same applies to planets, mountains river-deltas.

VI. The operation cycle is in other than my mental because it is with respect thereto, "permanent;" my mental, temporary and intermittent.

Contrast between permanence of cycle and transitoriness of my mental progression, is, of course, only way of saying: Difference of rate between extracorporeal and corporeal operation cycles. For, my graded percept series representing "change" (nebulae-planet series, rolled-stone series), proves the "permanence" of extraindividual reality corresponding thereto, exceeding slowness of operation cycle (particularly, of temperature change),—in the ultra-convenient time jargon,¹⁵ the corporeal cycle is so much more rapid, the extracorporeal seems permanent in comparison.

15. "Time" will be shown to be more way of saying rate of operation cycle, stage cycle has reached (etc.), according to context.

Permanence of the sensation-generating something, can be shown directly. I open my closed lids to look at my desk at intervals of 16, 8, 4, 2 seconds, 1 second, as fast as I can open and close,—desk always existent (visible). I infer it exists also in the non-visible intervals. "O but, you can't prove that; maybe it's annihilated." That the intervals are not periods of annihilation, I know from feeling desk continuously throughout them. So, even on esse-is-percepti logic, I have the same evidence of continuous existence of desk as if I saw it continuously,—and same I should from nature of case have, if it existed continuously (then I should see it only with eyes open, and that I do now). It is a permanent source of possible sensations, moreover, because when not in my perceptual field, it can, nevertheless, be depended upon to initiate sensation genesis under sensation-possible conditions. Whirling with eyes closed till dizzy and walking at random, in several trials, I strike against what turns out to be the desk, as capable of generating sensations as ever. And tossing over my shoulder, a stone on to it, I hear the characteristic sound.

But, given these results constant however often I test the question (given, i. e., that I have now all the evidence I should have were the desk permanent existent) if I may not infer it such existence, I may not infer by method of limits at all,—repudiation of inference "process," my mental itself become unintelligible.

One aspect of the difference in rate between the two cycles, is noncorrespondence of mental content which is function of the one cycle, with that which is function of the other, that is:

VII. My mental exhibits a fundamental discrepancy: With respect to my thought-feeling progression,¹⁶ my sensations-percepts are at once erratically labile and erratically stable,—discrepancy incomprehensible if my mental be sole existent, but easily understood if the two content groups are functions of a corporeal and an extracorporeal operation cycle, respectively (if the operation substrate is other than my mental).

Sensations-percepts erratically labile.—With thoughts intent on this work, I am conscious of sunlight and shadow, hammer-strokes, rattle of wagon. Each begins and ends in a way not prefigured in my thoughts and feelings,—sunlight gives place to shadow, without occasion in them; I cannot tell when strokes will end or rebegins. More regularly recurrent interpolations occur: Morning sunlight in east, evening in west; plants small in spring, large in autumn. But even these find no explanation in my thoughts-feelings and vary erratically,—sunlight absent ("cloudy"); plants fail to grow. And the same applies to comets, earthquakes, eclipses.

16. Thoughts and feelings too, are independent variables, but several circumstances combine to identify them over-closely (hence the late date at which feelings came to be accorded separate rank). Thus, both participate in the widening out of the mental life which occurs at puberty, and the rise of introspection coincides approximately therewith. Thence, the flattish crest of the feeling curve, parallels over long stretches of the mental life (whole period of sexual maturity), the thought curve, and only gradually diverges therefrom, shallowing off in dependence upon the sexual lysis. So, it happens that throughout the larger part of the introspective life, thoughts and feelings are observed to be closely concurrent,—to exhibit the "Ego" continuity.

Sensations-percepts erratically stable.—They do not participate in the progressive growth changes in my thought-feelings ("me"). If I leave my desk, I find it on my return, the same sensation-generator, whatever may have happened to me meanwhile. And the same applies to the vast majority of "natural objects" surrounding me.

CONCLUSIONS FROM CHAPTER XI.

Starting with an exhaustive trio of hypotheses, I am now in position definitely to reject Hypothesis 1 (solipsism), for that it be true, the individual's mental must be self-generating cycle. But though order and frequency of occurrence of my sensations, prove these not uncaused finalities in themselves but results in the causal chain, the sensation-generating operation cycle is not in my mental, which is, accordingly, no self-generating system. And I claim that Hypothesis 3 (my consciousness and something else co-exist) is rigorously proved, because the combination of 1 and 2 below, is what constitutes "certainty" (or "truth") of propositions.

(1) I have all the evidence now, of the existence of a something other than I, that I should from the nature of the case have, if the something other existed.

Then, if along with the perceived, there did coexist a sensation-generating imperceptible, its existence would be evidenced for me, only by the facts that (1) as there come to be established successively, the sensation-possible conditions, I experience successively, the visual, pressure, and pain sensations; and (2) my previous mental was incapable of directly causing them,—facts I already have. And if a sensation-generating something did persist despite my forgetfulness of it, I should know the fact only through experiencing pressure-pain sensations on knocking against it,—but I do now experience them. Again, if an operation cycle existed before my advent, I should know the fact only through experiencing upon my advent, percepts which could correspond only with operation cycles too advanced to have begun with my advent,—these facts, though, I already have. Similarly, if operation cycles did exist in my unconsciousness of them, and did persist across gaps in my conscious progression, I should know the facts only through percepts corresponding to operation cycle well advanced when first seen or more advanced than when last seen,—but such discrepant percepts I already have. If further, my desk were really sensation-generating something, the fact would be evidenced for me, only through my constantly experiencing sensations from it,—and I do now constantly experience them from it. And were my sensations-percepts functions of an extracorporeal, my thought-feeling progression function of a corporeal operation cycle, the facts would be evidenced for me, only through the observed discrepancy between these content-groups,—fact I already have.

"O but, you haven't proved the operation cycle in other-than-your-mental, but only not in your mental." Given that it is not in my mental, it is in either other than my mental, or in nothing

at all and does not exist, whereupon my sensations arise from nothing, without cause, contrary to proof (above). Moreover, I have now all the evidence of existence of cycle in other than my mental, that from nature of case I could have, did the cycle exist therein. For, did it so exist, I should know the fact not directly (one cannot be directly conscious of other than his mental), but as inference from (1) ascertained absence of operation cycle from my mental, with (2) presence in my mental in correspondence with cycle, of hiatus; taken in conjunction with the fact that (3) while my mental is demonstrably incapable of generating itself, it is, nevertheless, continually being generated.

THE FINAL ALTERNATIVE.

The situation is not: Get rid of matter and solve your problem,—you do not even avoid it! The situation is: Either something other than the individual's mental to account for his mental, or his mental itself, utterly unintelligible (solipsist-subjectivist dilemma). Or, alternatively and more familiarly:

(2) Hypothesis 3 not merely accords with and accounts for all the facts; it is of an exhaustive trio of hypotheses, the only hypothesis capable of so according and accounting.

Assert that my mental alone exists; and is, consequently, self-generating system,—at once, incomprehensible chaos. Then, I cannot understand why I experienced successively, the visual, pressure, and pain sensations; why when I had forgotten the "object, I nevertheless experienced pressure-pain sensations on recontact with it; why my earliest experiences included percepts which could correspond only to operation cycles too advanced to have commenced with my advent, why I have percepts corresponding to cycles of whose existence I was not conscious, and why I perceive "change" following intermission in my conscious progression; why I constantly experience sensations from the desk, however long or frequently I test the question; and why I find the discrepancy between my sensations-percepts and my thought-feeling progression. Per contra, Hypothesis 3 explains fully why I experienced successively, the visual, pressure, and pain sensations, —and so on, through the list.

"O but, I prefer Hypothesis 2, my consciousness doesn't afford data enough for me to decide." But, having now all evidence that I could from nature of case have if something else did exist, refusal to infer its existence is at price of repudiation of inference "process"—my mental itself become unintelligible.

"O but, perhaps the mental is unintelligible." Unintelligibility of the mental could be proved only in a mental intelligible enough to appreciate its own unintelligibility,—sort of insane-with-insight mental. Whether his is such, is question for each, separately. My mental I find intelligible, that is: With it I am able, through observation of my sensations-percepts, their frequency and constancy of occurrence; through analysis of the observations down to the constants giving rise to my sensations-percepts; and through synthesis, in this or that way, on basis of these constants

—I am able (1) to orient myself in my surroundings; (2) to know coming stages in my sensation-percept progression, so that (3) on the advent of those stages (development of this or that situation), I can act in a manner long planned out,—and if this be not "intelligible," I desire the word be defined. Accordingly, reduction of my mental to unintelligibility, I have to regard as the final reduction ad absurdum.

But my mental is intelligible only on condition that I view it as function of something not itself; make it self-explanatory,—incomprehensible chaos. I know, indeed, only two ways of viewing the mental: I can gaze abstractedly at a wall with inference (Ego-inference, cause inference) entirely in abeyance; or I can treat my sense data as subject matter of inference. The first is all I can understand by "pure" experience; and one might dream life away viewing his sense impressions as mere pictures, of nothing. But if he will have inference at all, there is no halt possible short of the inference-terminus, in the solipsist-subjectivist dilemma. So, he who has got rid of his bogie-man "matter," has not avoided his problems, but only changed their phrasing. The problems themselves are as basal and insistent as problems of constant interactions of content groups, as when they were problems of interaction of mind and matter.

WHAT DISTINGUISHES THE PHYSICAL?

Canon of exegesis.—My serial mental experience alone, assures me I am entitled to accept as real existent outside my mental everything I can succeed in interpolating as agent, in the operation cycle which ensues upon culmination of my desiring thoughts-feelings and ends by bringing about emergence of the desired sensations,—to accept as real, because what is constitutive for reality,¹⁷ is the body of inferences from my resulting sensations back to their inducing agents (generating capacities, environmental factors), agents themselves not appearing in consciousness (240), but implicit in their conscious (sensational) effects.¹⁸

Thus, the individual's serial mental experience alone, involves this conclusion from which you can never get away: The cosmos includes two series of happenings: "Physical" happenings, "mental" happenings. The existents making up the physical series, are characterized by capacity for directly initiating sensation-genesis those making up the mental series, by incapacity therefor (capacity of initiating only through intermediary of physical series). Accordingly, arguing away by Idealist of distinction between physical and mental to reduce physical to "idea," and arguing away by New Realist¹⁹ of that distinction to reduce both to "neutral stuff," merely rewords problem. Immediately, idea and neutral stuff are of two kinds: idea, neutral stuff, capable of directly initiating sensation-genesis; IDEA, NEUTRAL STUFF, incapable of directly

17. As far as knowable by me; if anything else exist, I could not know it, on any accredited methodology.

18. In some cases (sense-inappreciable cases), implicit in effects of effects.

19. Holt (E. B.). The Concept of Consciousness, 1914. Chs. VI, VII.

initiating it,—problem breaks out afresh. But this distinction touches not at all the separate question: Are physical and mental of the same order or of different orders of being, question determinable only by evidence of capacity or incapacity of intergenesis (240).

The canon is the complement of the Berkeleyan Law, formula all inclusive for extraindividual reality in so far as knowable (on accredited methodology) by the reality-enviroment individual. Conversely:

Canon of exegesis.—I am not entitled to accept as real existent outside my mental, anything I cannot succeed in interpolating as agent, in the operation cycle which ensues upon culmination of my desiring thoughts-feelings and ends by bringing about emergence of the desired sensations,—anything I cannot subject to the procedure of test.

Very differently worded, this is still equivalent of the Berkeleyan Law, inasmuch as the existents I am not able to interpolate, are just the mental.

"O but, you're only threshing the air; idealists know there has to be something outside the individual's mind, to account for his sensation-genesis." If the data adduced do not suffice to establish my contention that a sensation-inducing something exists outside the individual's mind, there will be plenty ready to show their insufficiency, seeing I maintain the unwanted view. But if those data do suffice to establish that contention, then, we enter on the separate question of the nature of extraindividual reality, with the question left by our methodology, unprejudged to be determined by its own line of evidence.

ORDER OF PRIORITY OF METAPHYSICAL PROBLEMS.

Having now proved (we hope) certain problems in, unfortunately, roundabout fashion, orientation to due perspective, is requisite. Systematically presented, the problems would run:

Book I.—The fundamental initial data of metaphysics (what one is directly conscious of),—the locus existentiae of qualities and relations.

Prop. I. That secondary qualities are mental existents (Ch. VI).

Prop. II. That primary qualities are mental existents (Ch. VII).

Prop. III. That relations are mental existents (future chapter).

Prop. IV. That qualities and relations are, exclusively and discretely, each individual's mental, no environmental similia co-existing (Ch. XII).

Corollary from Props. I-IV: The individual is caught in the subjectivistic trap (Chs. IX-X).

Book II.—The escape from subjectivism,—the locus existentiae of the psychogenic operation cycle; it is outside the individual's mental.

Prop. I. That the individual's sensations have a cause (Ch. XI).

Prop. II. That the cause is not within his mental (Ch. XI).

Prop. III. That the cause is in other than his mental (Ch. XI).
Corollary from Props. I-III: Extraindividual reality exists,—be its nature what that may.

Book III.—The nature of extraindividual reality.

Corollary from Book II, Props. II-III: One is entitled to accept as real existent, everything he is able to identify as link in the sensation-causal chain (Ch. XI); and to classify the existents on basis of their behavior characteristics, as inferred from his resulting sensations (Ch. XIV).

Prop. I. That, able to prove that certain existents have behavior characteristics paralleling his own, he is entitled to accept as real, "other selves" (Ch. XIV).

Prop. II. That different sensations resulting in himself and another from the same environmental moment (stimulus), proves sensation two-factored resultant,—proves the existence of a common environmental factor, interworking with an organismal factor different in each case (Ch. VI).

Prop. III. That the common environmental factor has the behavior characteristics: Giving rise to sensations and interference phenomena, constant of sum; and is not idea (Ch. X)—characteristics constitutive for Energy (Ch. VIII).

Prop. IV. That the myriad conjunctions in which my sensations occur, prove the existence of a something determining corresponding conjunctions among the sensation-causal energies,—constitutive for Matter is: Selective energy-modifying (absorbing) capacity, alias inertia (Ch. VIII).

Book IV. The metaphysics of the operation cycle,—genesis, causation, explanation.

Prop. I. The operation cycle and change: Concept formulating the experience that a mental state is in course of replacement (total or partial) by a different state,—replacement, as incident of passage of operation cycle from stage corresponding with the one state, over to the stage corresponding with the different state ("change" function of energy flux). Antonym (of change): Alteration, denoting replacement of one physical condition by another, in connection with working of operation cycle.

Prop. II. The operation cycle and motion: Concept (mental unity) formulating the progressive changes experienced in connection with the composite physical condition of momentum, into which enter only matter and energy-quantum,—rate and time-integral ("force") mere description of how that quantum is added (en bloc, or bit by bit).

Prop. III. The operation cycle and space: Concept synthesizing the constants in the experiences resulting from the organism's own motility among the solid (to less extent, liquid) bodies making up its environment (Ch. VII).

Prop. IV. The operation cycle and time: Concept synthesizing the constants in the experiences resulting from the trend ("one-dimensionality") and especially rate of the extraorganismal operation cycle.

Prop. V. The operation cycle and causation: Concept synthesizing two constants in experiences of serial happenings, antecedence and invariability ("inevitableness"), constants functions respectively, of constants of the operation cycle,—"antecedence"

mere way of affirming that energy flow is from higher to lower potential (never the reverse); while causal "necessity" is given between constancy of energy flow down the steepest gradient, and constancy of energy sum.

Prop. VI. The operation cycle and evolution: Concept synthesizing the alterations inferred to have come about in substance (matter, electrons, perhaps also ether) in course of the operation cycle (as incident of energy downflow).

Prop. VI a. The operation cycle and life.

Prop. VI b. The operation cycle and mind,—reactive-dynamic role of consciousness, determining via alterations in nerve resistance, preferential conduction with consequent preferential discharge on to muscles, role summing to the survival value attaching to optimum motor response (Chs. II-III).

Prop. VII. The limit of knowledge of reality, on penultimate methodology (limit of inference),—progress backward along causal chain, without theoretical limit; in practice, however, we are halted by the impossibility of inferring from given conditions resulted from critical sequence (Ch. V), across that sequence, to the conditions on its antecedent (causal) side, and advance comes about through the overcoming of that impossibility by special devices (experiment, hypothesis).

Well aware of the divergences from current metaphysics, Chapters XV et seq. will defend this order, in particular that of Book IV, proving such theses as there is no priority of "time" over change and motion because these involve "succession." time and succession being mere coordinate ways of describing one inferred fact, the trend of the operation cycle (etc).

**END OF
TITLE**